TDS-90-03

Preliminary Testing and Evaluation of New Computer Programs for Traffic Analysis – Task: Evaluation of Supercomputer Potential

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Documentation Page

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Preliminary Testing and Evaluation of New Computer Programs for Traffic Analysis – Task: Evaluation of Supercomputer Potential

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Abstract: For the purpose of evaluating the potential of supercomputers in traffic simulation/modelling, two representative traffic modelling packages have been converted and run on two representative supercomputers. The models tested were TRANSYT-7F, a system developed some time ago for mainframe computers, but now supported and available on PC systems, and INTEGRATION, a system developed to run on an 80386-based workstation at Queen's University in Kingston, Ontario. The computers used for the test were a CRAY X-MP vector supercomputer and a MYRIAS SPS-2 massively parallel supercomputer.

The results have indicated that the task of porting such packages can be quite modest, and that extremely fast processing of such models can be achieved, producing in minutes or even seconds what otherwise might take hours on conventional PC's or workstations for realistic networks.

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1/ Introduction

Over the past fifteen or more years, there has been a steady trend towards personal computing, at times reaching explosive proportions, as more and more powerful personal computers, microcomputers, and personal workstations have become available at lower and lower cost. The result has been a dramatic reversal of the situation that had existed for some time, namely, that the most cost-effective computing was available from the largest affordable central computer configuration. During the late 60's and early 70's, this was quantified in what was known as "Grosch's Law - The power of a single computer increased as the square of the cost". This gave rise to the Central Service Bureau industry, which was able to provide a computing "economy-of-scale" which was attainable through the sharing of a large computing facility.

During the 70's, however, the birth of the microcomputer signalled this reversal of computing cost-effectiveness, with regular, startling advances in computing power, main memory, and peripheral devices at cheaper and cheaper prices. This technological revolution led to an equally major organizational revolution among computer users, in which data processing power became highly decentralized to the point where most, if not all, of the computing needs of even the most demanding users could be satisfied by their ever more powerful "personal" computers or workstations.

While all this was going on at the "small" end of the computer spectrum, however, major advances were also taking place at the "large" end of the spectrum. The raw computing power of individual computers was advancing steadily, due in large part to the demands of users whose ever increasingly large problems could not be split up and run on a large number of smaller machines, but rather required the full attention of extremely fast single processors to solve the enormous computational problems found in a variety of application areas such as aerospace design, weather modelling and prediction, molecular modelling, astronomy, etc. The computers that evolved in response to these needs came to be known as "supercomputers", and the name was appropriate, both in terms of performance and cost!

The net result of these two trends, in a large part of the industry, was a "bipolarization" of available computing power. Individual users became less and less reliant on corporate mainframes, and even on departmental mini-and midi-computers, in favour of their own PC's or workstations. For the REALLY BIG USERS, on the other hand, access to corporate or

service bureau supercomputers became more popular. Lost in the shuffle, except in certain areas such as banking, insurance, and other large database applications, was the conventional central mainframe computer. For many users, reliance on, and even access to, central mainframes disappeared.

It was within this environment that some mutual interest in this current project developed. As in many other application areas, transportation researchers have tended toward the PC/workstation environment for the new, or continued development of transportation simulation modelling tools. An existing package, TRANSYT-7F, which was developed for mainframe computers almost ten years ago, has been maintained in a PC form for the last five years. A newer package, INTEGRATION, was developed totally within the PC environment, and, in fact, in the BASIC programming language. While the programs perform adequately for modest problems, however, it has been estimated that running times for larger, more realistic integrated transportation networks would be far too long to be considered feasible for an operating environment. Thus, there developed a natural interest in moving these programs forward in performance by one or more orders of magnitude. This interest was also enhanced by positive reports by other researchers of the potential for supercomputer utilization in transportation research [1].

2/ The Supercomputer World

Much has been written about the rapid development of the supercomputer world. Sherman [15] gives a concise overview of the current state of this world from the perspective of a Research Consortium formed to provide market research and other services for vendors and users of supercomputers. Randol [16] discusses the Evolution of Supercomputing Environments from the perspective and observations of Control Data, a vendor of high performance computing equipment spanning most of the scientific computing spectrum. Sydor et al [18] describe their experience in a number of different applications in the water resource research area in which they make full use of "Both Worlds", i.e. the microcomputer and the supercomputer.

Ewald [14] provides an assessment of the industry, and future strategic directions from the perspective of the acknowledged industry leader, Cray Research Inc.

A somewhat more detailed review of supercomputing history, applications, and industry strategy is provided in The Supercomputer Era [17], which was published in 1987; several quotations from this book are provided as follows:

> "A supercomputer is the most powerful computer available at any given time."
>
> "If a beginning must be picked for the supercomputer era, it might be picked for the years 1985-1986. In those two years, the key developments which are giving momentum to the supercomputer era began to have a substantial impact upon the availability and use of supercomputing." (It was during this period that the multi-million dollar National Science Foundation initiatives in the United States appeared in the form of National Supercomputer Centers and associated communications facilities.)
>
> "Supercomputer does not refer to a particular design or type of computer, although since 1976, when the CRAY-1 was introduced, the supercomputer market has been dominated by one basic design philosophy, emphasizing extremely rapid processing of vectors, a particular type of calculation. – Within a few years, this design based upon new technologies such as multiple processors supplant it."

"Supercomputers do not exist because they are neat machines, but because they add new, qualitative differences to science and business as well as quantitative improvements."

It is in relation to the claim in this last quotation that the current project has been performed. The required degree of improvement in performance of the transportation models represents almost, if not completely, a qualitative difference in utility.

3/ Objectives of the Project

The major objectives of this project were to determine:

- the relative degree of difficulty of converting existing models to run on representative supercomputers,
- the immediate and potential performance improvements realizable through running these models on supercomputers,
- overall design considerations for revisions to existing models or new models to fully exploit existing architectures,
- considerations with respect to operational use of existing supercomputer facilities for ongoing research or proposed "production" use of these models.

4/ Results

In preparation for this project, current versions of the FORTRAN code and associated files (sample problem data etc.) for the two modelling systems (TRANSYT-F7 and INTEGRATION) were organized on separate high-density 5 1/4" floppy disks. Existing program documentation for the systems is identified as references [2], [3], [4] and [5].

The sample problem run with INTEGRATION was a simplified network (based on Kingston, Ontario), made up of 7 origin/destination zones, 35 additional nodes, and 70 links and represents a typical integrated network configuration.

The sample problems run with TRANSYT-7F were supplied by the Federal Highway Administration on the original distribution tape. They were a Daytona Beach base case (4 nodes and 28 links), plus the base case with added bus links, bottle-neck, parking lot and double cycle (total of 12 nodes and 96 links). Both test cases were run in the optimization mode.

Arrangements were made with representatives of CRAY CANADA INC. and MYRIAS RESEARCH CORPORATION to run these two programs as benchmarks, and to report on the degree of simplicity (or difficulty) therewith. Meetings with both parties were held, during which time program files and documentation were provided, and the general nature of the project was discussed. As both groups proceeded with the benchmarking activity, further meetings and conversations were held to review interim results, occasional problems, and general comments on analysts' observations, etc. The results of these activities are provided below:

4.1/ Cray Canada Inc.

Benchmark activities for both programs were performed on the CRAY X-MX/24 at the Ontario Centre for Large Scale Computation at the University of Toronto by personnel of Cray Canada Inc.

4.1.1/ INTEGRATION

Several minor problems were encountered in initial runs, primarily with "subscript out of range" warnings and subsequent execution errors. Meetings were arranged between the CRAY analyst and the author of the program, and the difficulties were resolved. The source

code was compiled (with full vectorization/optimization invoked) and the small sample problem distributed on the program diskette was run, with satisfactory results. Initial running time for the program on this problem was approximately 7 CPU seconds. After some review of the source code and the optimizing compiler's "notes", minor source code changes were made, the program was recompiled, and the resulting run was completed in 4.61 CPU seconds. The results of this final run are given in Appendix A. The run was made utilizing FLOWTRACE, an option of the Cray FORTRAN compiler which records and prints CPU utilization statistics for each subroutine of the program. These statistics can be used to determine which routine(s) consume the bulk of the running time, and which therefore deserve most attention in source code/algorithmic optimization. In this particular case, the FLOWTRACE statistics are given on the bottom of the first page of APPENDIX A. They show that the total execution time was 4.610 CPU seconds, and the routines consuming most of the time were MOVEVEH (37.99%) and GENOD (31.09%).

4.1.2/ TRANSYT-7F

The program and sample problem files for this system were developed on diskette by converting the original 1983 distribution magnetic tape to diskette, and then editing hard-copy (paper) form over the several years since the receipt of the original tape. As both the documentation [2] , [3], and the current source listing (Appendix G) indicate, there have been many changes of both cosmetic and computational nature to the original program, which was used to produce the sample problem output distributed with the tape. In the discussion which follows, mention is made of seemingly minor differences between the distributed sample problem output and the CRAY output. In the absence of evidence to the contrary, we must attribute these differences in output to changes in the source code over this period.

Appendix B lists the original output file for the Base Case sample problem from the distribution tape. Appendix C lists the CRAY output obtained by running the program with the Base Case data file used as input. While the results are very similar, there are some differences in the numerical results. Given that there are no obvious sources of major computational variation (e.g. library random number generation routines), it must be assumed that the differences noted are due to differences in standard numerical precision between the CRAY and the original computer or algorithmic changes introduced between the time of the original execution of the sample problem and the compilation of the current source code.

The logfile on the bottom of the fourth last page of Appendix C shows the accumulated time for various stages of running this problem. The execution time (i.e. program running time) for this sample problem can be calculated as (35.4669 - 33.8681) = 1.60 CPU seconds.

Appendix D lists the original output file for the Extended Case sample problem from the distribution tape. Appendix E lists the CRAY output obtained by running the program with the Extended Case data file used as input. While the results are again very similar, there are again some differences in the numerical results. Note that the original output listing includes one more warning message (for card #27) than is produced by the CRAY run. Also, the original output file does not include graphs for links 903 and 901, even though these are requested (card # 172) and are produced in the CRAY run. As can be gleaned from the logfile (fifth last page of Appendix E), the execution time for this run was (39.6878 - 33.9477) = 5.74 CPU seconds.

Appendix F is similar to Appendix E, except that it was produced using the FLOWTRACE option on the CRAY X-MP. It shows a total execution time of 5.716 CPU seconds. Of greater interest, however, is the indication that the routine SUBPT (the main simulation routine) consumed 93.53% of this time. It is to be noted that this is the main routine during simulation runs, and that it is also called repeatedly by HILLCL during timing optimization runs. Obviously, major attention should be afforded this routine in preparation for the program's utilization for significantly larger runs.

4.2/ MYRIAS Research Corporation

The benchmark activities for both programs were performed on a MYRIAS SPS-2 configuration located at MYRIAS offices in Edmonton, Alberta.

4.2.1/ General

In preparation for running these programs on the MYRIAS machine, MYRIAS personnel ran them both on a SUN 3/160. This workstation uses essentially the same basic processor which is replicated in the MYRIAS configuration (the Motorola 68020 processor plus an associated 68882 floating point processor).

4.2.2/ INTEGRATION

The running time for the unmodified version of source code for INTEGRATION on the SUN system was reported to be 90 CPU seconds, with a similar figure reported for a single stream run on the MYRIAS machine. Some manual investigation of the program logic was undertaken, with the conclusion that a rather major revision of the program structure would be needed to fully exploit the parallel MYRIAS architecture. A brief discussion between the MYRIAS analyst and the author of INTEGRATION was arranged, and several ideas were exchanged. Because the sample problem was deemed to be a trivial test of the parallel architecture, no further program analysis was undertaken, pending the development of a much larger test problem.

4.2.3/ TRANSYT-7F

The TRANSYT-7F runs consumed approximately five minutes on the SUN system. Analysis showed most of this time to be taken by the initialization and I/O activities, leaving very little computation in the relatively small single runs to be "parallelizable". However, an analysis of the overall systems approach suggests that a natural area for parallelism is in the simultaneous execution of totally independent steps within the optimization procedure, thereby using multiple processors to perform, in parallel, evaluations of an entire range of timing options. Best estimates from the MYRIAS analyst involved suggest that, with a major reorganization of the code to scan over the outer cycle time, the five minutes running time for the sample problem could be reduced to 30-40 seconds. However, it was judged to be more prudent to await the provision of a more realistic, much larger, problem.

5/ Conclusions

The preceding results tend to corroborate "conventional wisdom" in the field of supercomputing potential and achievement. Extremely impressive performance gains can be obtained very easily through the use of a high-performance processor such as the CRAY-XMP, which offers superior execution performance even on scalar problems, and significantly higher performance on problems which are amenable to the vector architecture.

The appeal of cost-effective parallel processing, on the other hand, requires somewhat greater program modification and design efforts to obtain the very significant price-performance benefits which are theoretically available.

In a number of other application areas [8], [9], [10], [12], very significant results have been reported for programs which have been specifically modified or designated to exploit the architecture of massively parallel machines such as the MYRIAS SPS-2.

Specifically, the results of this project have demonstrated the relative ease of converting existing FORTRAN 77 code to run effectively on the CRAY X-MP, and have pointed the way to redesigning such codes to run effectively on a parallel machine such as the MYRIAS SPS-2.

Because of the very small size of the only test problems available, however, it has not been possible to accurately gauge the performance of either machine, in terms of processing time, turnaround time, and total cost, on problems which represent an order of magnitude increase in complexity. Now that both programs have been ported to the CRAY, however, it should be a very simple matter for the author of INTEGRATION to use the CRAY for further development or integrated use of both programs through the academic network connections linking the Queen's campus network directly to the CRAY. Given the academic slant on this work, the costs of utilizing the CRAY would also be minimized through the applicability of the academic rate to such work. The academic rate is $150/CPU hour, as compared with the nominal commercial rate of $2,000/CPU hour.

Over the longer term, it is expected that increased access to additional supercomputer facilities will become available, as upgraded networks are put into place to link an ever increasing set of high-performance facilities. Implementation of the National Research Network [13] is well under way, and will provide improved access by academic government (federal and provincial) and industrial researchers to computers across the country and beyond.

6/ Recommendations

It is highly recommended that much larger, real-life test problems be developed for both INTEGRATION and TRANSYT-7F, and that these then be benchmarked on the two supercomputer systems tested to date.

There have been a number of other developments in the high-performance computing field which also merit further evaluation. Meiko Corporation has announced, among other things, an add-on board feature for SUN workstations which promises great performance. They have also agreed to benchmark the existing programs, but, based on the current experience, it is recommended that such benchmarking await the availability of more realistic test problems. Similarly, Thinking Machines Corporation, who market the Connection Machine Corporation, and who have also received a recent large contract from DOD (U.S.) to develop a next-generation supercomputer, have also agreed to benchmark the programs. It is recommended that this be done, once the larger test problems have been developed.

In the meantime, it is recommended that work on INTEGRATION and TRANSYT-7F continue with appropriately larger runs performed on the CRAY at the Ontario Centre for Large Scale Computation.

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Appendix A

```
INTEGRATION Version 1.1f : TRAFFIC NETWORK SIMULATION MODEL
Development and Educational Version

Department of Civil Engineering at Queens
R&D Branch Ministry of Transportation Ontario

July 1989
```


F L O W T R A C E -- Alphabetized summary

	Routine	Time executing		Called	Average T			
2	$MAIN	0.318	(6.90%)	1	0.318	@00000200a	Called by	*SYSTEM
1	*SYSTEM	>>>	(0.00%)	1	>>>	@00000000a	Called by	
19	BUILTREE	0.240	(5.20%)	242	>	@00006025a	Called by	$MAIN
17	DEFLINKS	>	(0.00%)	1	>	@00005202a	Called by	READDATA
30	ENTERNET	0.095	(2.06%)	3600	>	@00030126a	Called by	$MAIN
14	FILENAME	>	(0.02%)	1	>	@00004131a	Called by	READDATA
6	FSTLIN	>	(0.00%)	1	>	@00001371a	Called by	SETUP
5	FSTPAGE	>	(0.01%)	1	>	@00000660a	Called by	SETUP
15	GENOD	1.433	(31.09%)	1	1.433	@00004401a	Called by	READDATA
26	INCID	>	(0.00%)	61	>	@00030667a	Called by	$MAIN
33	INCSUM	>	(0.00%)	1	>	@00033541a	Called by	$MAIN
25	LINKSUM	0.108	(2.34%)	5	0.022	@00032255a	Called by	$MAIN
29	MOVEVEH	1.751	(37.99%)	3600	>	@00027612a	Called by	$MAIN
20	NOGUIDE	>	(0.00%)	1	>	@00014031a	Called by	$MAIN
24	ODTIMTAB	0.008	(0.17%)	5	0.002	@00014116a	Called by	$MAIN
31	OPSIGNAL	0.126	(2.74%)	20	0.006	@00021614a	Called by	$MAIN
21	PLOTSET	>	(0.00%)	1	>	@00005343a	Called by	$MAIN
23	QCLEAR	0.279	(6.06%)	241	0.001	@00030324a	Called by	$MAIN
16	RANDOM	>	(0.00%)	30	>	@00034452a	Called by	GENOD
8	READ1	0.004	(0.09%)	1	0.004	@00001607a	Called by	READDATA
9	READ2	0.018	(0.39%)	1	0.018	@00002124a	Called by	READDATA
10	READ3	0.001	(0.02%)	1	0.001	@00002702a	Called by	READDATA
11	READ4	0.005	(0.11%)	1	0.005	@00003213a	Called by	READDATA
12	READ5	>	(0.00%)	1	>	@00003503a	Called by	READDATA
13	READ6	0.004	(0.09%)	1	0.004	@00003706a	Called by	READDATA
7	READDATA	>	(0.01%)	1	>	@00001455a	Called by	$MAIN
27	RSETFLOW	0.001	(0.02%)	61	>	@00030432a	Called by	$MAIN
3	SETSEED	>	(0.00%)	1	>	@00034517a	Called by	$MAIN
28	SETSGNAL	0.209	(4.52%)	3601	>	@00021067a	Called by	$MAIN
4	SETUP	>	(0.00%)	1	>	@00000604a	Called by	$MAIN
22	SETXY	>	(0.00%)	1	>	@00005374a	Called by	PLOTSET
18	TRAVLTIM	0.002	(0.04%)	242	>	@00030570a	Called by	$MAIN
32	TRIPSUM	0.005	(0.12%)	1	0.005	@00031057a	Called by	$MAIN
* * *	TOTAL	4.610		76531 Total calls				

```
F L O W T R A C E  --  Calling tree
    1   *SYSTEM  00000000a
    2     $MAIN     00000200a
    3       SETSEED  00034517a
    4       SETUP    00000604a
    5         FSTPAGE   00000660a
    6         FSTLIN    00001371a
    7       READDATA 00001455a
    8         READ1     00001607a
    9         READ2     00002124a
   10         READ3     00002702a
   11         READ4     00003213a
   12         READ5     00003503a
   13         READ6     00003706a
   14         FILENAME  00004131a
   15         GENOD     00004401a
   16           RANDOM     00034452a
   17         DEFLINKS 00005702a
   18       TRAVLTIM 00030570a
   19       BUILTREE 00006025a
   20       MOGUIDE  00014031a
   21       PLOTSET  00005343a
   22         SETXY     00005374a
   23       QCLEAR   00030324a
   24       ODTIMTAB 00014116a
   25       LINKSUM  00032255a
   26       INCID    00030667a
   27       RSETFLOW 00030432a
   28       SETSGNAL 00021067a
   29       MOVEVEH  00027612a
   30       ENTERNET 00030126a
   31       OPSIGNAL 00021614a
   32       TRIPSUM  00031057a
   33       INCSUM   00033541a

Input and Output Data Files:
  File  1 is QNET1
  File  2 is QNET2
  File  3 is QNET3
  File  4 is QNET4
  File  5 is QNET51A
  File  6 is MINPATH
```

ORIGIN DESTINATION TRIP TIMES IN MINUTES AFTER: 0. minutes

Origin	Destinations						
1	0.00	10.18	8.12	3.78	4.30	6.30	7.58
2	10.18	0.00	3.78	8.12	7.58	6.30	4.30
3	8.33	4.00	0.00	6.27	5.73	4.63	3.53
4	3.78	8.12	6.05	0.00	3.32	4.42	5.52
5	4.30	7.58	5.52	3.32	0.00	3.70	4.98
6	6.30	6.30	4.42	4.42	3.70	0.00	3.70
7	7.58	4.30	3.32	5.52	4.98	3.70	0.00

LINK FLOW SUMMARIES AT TIME: 0. minutes

	NODE Strt	NODE End	LINK Name	Typ S	Typ P	Speed (kph)	Satur (vphg)	Ln (#)	Lgth (m)	Link Flow (vehs)	V/C ratio (#)	Total Time (min)	Aver Time (min)
1	10	1	TO-ZONE1	101	1	70.0	2000.	2	1414.	0	0.00	0.	0.0
2	14	2	TO-ZONE2	101	1	70.0	2000.	2	1414.	0	0.00	0.	0.0
3	44	3	TO-ZONE3	101	1	70.0	2000.	2	900.	0	0.00	0.	0.0
4	17	4	TO-ZONE4	101	1	70.0	2000.	2	900.	0	0.00	0.	0.0
5	11	5	TO-ZONE5	101	1	70.0	2000.	2	1000.	0	0.00	0.	0.0
6	12	6	TO-ZONE6	101	1	70.0	2000.	2	1000.	0	0.00	0.	0.0
7	13	7	TO-ZONE7	101	1	70.0	2000.	2	1000.	0	0.00	0.	0.0
8	16	10	1ST AVENUE NB		1 2	50.0	1400.	2	1300.	0	0.00	0.	0.0
9	11	10	KINGSTON RD WB		1 1	60.0	1600.	1	2236.	0	0.00	0.	0.0
10	1	10	FR-ZONE1		1 1	70.0	2000.	2	1414.	0	0.00	0.	0.0
11	12	11	KINGSTON RD WB		2 1	60.0	1600.	1	2000.	0	0.00	0.	0.0
12	10	11	KINGSTON RD EB		2 1	60.0	1600.	1	2236.	0	0.00	0.	0.0
13	22	11	2ND AVENUE NB		2 2	50.0	1400.	1	300.	0	0.00	0.	0.0
14	5	11	FR-ZONE5		2 2	70.0	2000.	2	1000.	0	0.00	0.	0.0
15	28	12	3RD AVENUE NB		3 2	50.0	1400.	1	300.	0	0.00	0.	0.0
16	11	12	KINGSTON RD EB		3 1	60.0	1600.	1	2000.	0	0.00	0.	0.0
17	13	12	KINGSTON RD WB		3 1	60.0	1600.	1	2000.	0	0.00	0.	0.0
18	6	12	FR-ZONE6		3 2	70.0	2000.	2	1000.	0	0.00	0.	0.0
19	12	13	KINGSTON RD EB		4 1	60.0	1600.	1	2000.	0	0.00	0.	0.0
20	14	13	KINGSTON RD WB		4 1	60.0	1600.	1	2236.	0	0.00	0.	0.0
21	34	13	4TH AVENUE NB		4 2	50.0	1400.	1	300.	0	0.00	0.	0.0
22	7	13	FR-ZONE7		4 2	70.0	2000.	2	1000.	0	0.00	0.	0.0
23	40	14	5TH AVENUE NB		5 2	50.0	1400.	2	1300.	0	0.00	0.	0.0
24	13	14	KINGSTON RD WB		5 1	60.0	1600.	1	2236.	0	0.00	0.	0.0
25	2	14	FR-ZONE2		5 1	70.0	2000.	2	1414.	0	0.00	0.	0.0
26	10	15	1ST AVENUE SB	101	1	50.0	1400.	2	1300.	0	0.00	0.	0.0
27	19	16	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
28	18	16	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
29	15	17	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
30	18	17	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
31	23	18	QUEEN'S WAY WB1	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
32	4	19	FR-ZONE4	101	1	70.0	2000.	4	900.	0	0.00	0.	0.0
33	15	20	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
34	19	20	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
35	11	21	2ND AVENUE SB	101	1	50.0	1400.	1	300.	0	0.00	0.	0.0
36	25	22	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
37	24	22	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
38	21	23	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
39	24	23	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
40	29	24	QUEEN'S WAY WB2	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
41	20	25	QUEEN'S WAY EB1	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
42	21	26	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
43	25	26	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
44	12	27	3RD AVENUE SB	101	1	50.0	1400.	1	300.	0	0.00	0.	0.0
45	31	28	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
46	30	28	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
47	27	29	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
48	30	29	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
49	35	30	QUEEN'S WAY WB3	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
50	26	31	QUEEN'S WAY EB2	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
51	27	32	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
52	31	32	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
53	13	33	4TH AVENUE SB	101	1	50.0	1400.	1	300.	0	0.00	0.	0.0
54	37	34	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
55	36	34	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
56	33	35	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
57	36	35	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
58	41	36	QUEEN'S WAY WB4	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
59	32	37	QUEEN'S WAY EB3	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
60	33	38	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
61	37	38	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
62	14	39	5TH AVENUE SB	101	1	50.0	1400.	2	1300.	0	0.00	0.	0.0
63	43	40	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
64	42	40	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
65	39	41	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
66	42	41	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0
67	3	42	FR-ZONE3	101	1	70.0	2000.	4	1150.	0	0.00	0.	0.0
68	38	43	QUEEN'S WAY EB4	101	1	110.0	2000.	2	1800.	0	0.00	0.	0.0
69	39	44	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
70	43	44	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	0	0.00	0.	0.0

Total link travel times = 0. veh-mi n
= 0.00 veh- hrs
Total network travel = 0. veh-km
Total network length = 59.85 km

Average network speed = 0. km/h
Average trip time/veh = 0.0000 min
Average trip length/veh = 0.0000 k m

Timing Optimization at 3. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	0	1600	0.00	0.15	0.30	30	8	22	11	4	0	11
1	2	10	481	4000	0.12	0.15	0.30	30	8	22	11	4	0	11
2	1	8	68	2800	0.02	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 3. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.15	0.30	30	8	22	11	4	0	11
1	2	12	206	1600	0.13	0.15	0.30	30	8	22	11	4	0	11
2	1	13	30	1400	0.02	0.15	0.30	30	8	22	11	4	15	26
2	2	14	161	4000	0.04	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 3. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	0	1600	0.00	0.15	0.30	30	8	22	11	4	0	11
1	2	17	0	1600	0.00	0.15	0.30	30	8	22	11	4	0	11
2	1	15	0	1400	0.00	0.15	0.30	30	8	22	11	4	0	11
2	2	18	158	4000	0.04	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 3. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.15	0.30	30	8	22	11	4	0	11
1	2	20	206	1600	0.13	0.15	0.30	30	8	22	11	4	0	11
2	1	21	30	1400	0.02	0.15	0.30	30	8	22	11	4	15	26
2	2	22	161	4000	0.04	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 3. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	0	1600	0.00	0.15	0.30	30	8	22	11	4	0	11
1	2	25	494	4000	0.12	0.15	0.30	30	8	22	11	4	0	11
2	1	23	53	2800	0.02	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 6. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	30	1600	0.02	0.19	0.34	30	8	22	12	4	0	12
1	2	10	760	4000	0.19	0.19	0.34	30	8	22	12	4	0	12
2	1	8	110	2800	0.04	0.15	0.34	30	8	22	10	4	16	26

Timing Optimization at 6. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.34	0.49	34	8	26	18	4	0	18
1	2	12	551	1600	0.34	0.34	0.49	34	8	26	18	4	0	18
2	1	13	165	1400	0.12	0.15	0.49	34	8	26	8	4	22	30
2	2	14	254	4000	0.06	0.15	0.49	34	8	26	8	4	22	30

Timing Optimization at 6. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	53	1600	0.03	0.15	0.30	30	8	22	11	4	0	11
1	2	17	53	1600	0.03	0.15	0.30	30	8	22	11	4	0	11
2	1	15	149	1400	0.11	0.15	0.30	30	8	22	11	4	15	26
2	2	18	253	4000	0.06	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 6. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.34	0.49	34	8	26	18	4	0	18
1	2	20	551	1600	0.34	0.34	0.49	34	8	26	18	4	0	18
2	1	21	158	1400	0.11	0.15	0.49	34	8	26	8	4	22	30
2	2	22	254	4000	0.06	0.15	0.49	34	8	26	8	4	22	30

Timing Optimization at 6. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	41	1600	0.03	0.19	0.34	30	8	22	12	4	0	12
1	2	25	750	4000	0.19	0.19	0.34	30	8	22	12	4	0	12
2	1	23	116	2800	0.04	0.15	0.34	30	8	22	10	4	16	26

Timing Optimization at 9. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	109	1600	0.07	0.20	0.35	30	8	22	13	4	0	13
1	2	10	802	4000	0.20	0.20	0.35	30	8	22	13	4	0	13
2	1	8	125	2800	0.04	0.15	0.35	30	8	22	9	4	17	26

Timing Optimization at 9. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.40	0.65	50	8	42	26	4	0	26
1	2	12	635	1600	0.40	0.40	0.65	50	8	42	26	4	0	26
2	1	13	359	1400	0.26	0.26	0.65	50	8	42	16	4	30	46
2	2	14	266	4000	0.07	0.26	0.65	50	8	42	16	4	30	46

Timing Optimization at 9. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	104	1600	0.06	0.15	0.30	30	8	22	11	4	0	11
1	2	17	104	1600	0.06	0.15	0.30	30	8	22	11	4	0	11
2	1	15	202	1400	0.14	0.15	0.30	30	8	22	11	4	15	26
2	2	18	281	4000	0.07	0.15	0.30	30	8	22	11	4	15	26

Timing Optimization at 9. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.40	0.66	50	8	42	25	4	0	25
1	2	20	635	1600	0.40	0.40	0.66	50	8	42	25	4	0	25
2	1	21	366	1400	0.26	0.26	0.66	50	8	42	17	4	29	46

2	2	22	269	4000	0.07	0.26	0.66	50	8	42	17	4	29	46

Timing Optimization at 9. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	90	1600	0.06	0.21	0.36	30	8	22	13	4	0	13
1	2	25	830	4000	0.21	0.21	0.36	30	8	22	13	4	0	13
2	1	23	130	2800	0.05	0.15	0.36	30	8	22	9	4	17	26

Timing Optimization at 12. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	150	1600	0.09	0.22	0.37	30	8	22	13	4	0	13
1	2	10	896	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	146	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 12. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.46	0.85	117	8	109	59	4	0	59
1	2	12	735	1600	0.46	0.46	0.85	117	8	109	59	4	0	59
2	1	13	552	1400	0.39	0.39	0.85	117	8	109	50	4	63	113
2	2	14	299	4000	0.07	0.39	0.85	117	8	109	50	4	63	113

Timing Optimization at 12. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	131	1600	0.08	0.15	0.33	30	8	22	10	4	0	10
1	2	17	131	1600	0.08	0.15	0.33	30	8	22	10	4	0	10
2	1	15	251	1400	0.18	0.18	0.33	30	8	22	12	4	14	26
2	2	18	296	4000	0.07	0.18	0.33	30	8	22	12	4	14	26

Timing Optimization at 12. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.45	0.81	90	8	82	45	4	0	45
1	2	20	717	1600	0.45	0.45	0.81	90	8	82	45	4	0	45
2	1	21	507	1400	0.36	0.36	0.81	90	8	82	37	4	49	86
2	2	22	299	4000	0.07	0.36	0.81	90	8	82	37	4	49	86

Timing Optimization at 12. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	140	1600	0.09	0.22	0.37	30	8	22	13	4	0	13
1	2	25	890	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	136	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

ORIGIN DESTINATION TRIP TIMES IN MINUTES AFTER: 15. minutes

Origin	Destinations						
1	0.00	12.62	11.40	4.38	5.68	7.83	9.80
2	12.40	0.00	4.52	10.37	9.85	7.87	5.68
3	10.38	4.40	0.00	8.35	7.90	5.92	4.53
4	4.23	10.95	9.22	0.00	4.88	4.17	8.13
5	4.70	8.80	8.10	4.12	0.00	4.02	5.98
6	6.70	6.67	6.10	5.57	3.87	0.00	3.85
7	8.85	4.67	4.47	7.30	6.02	4.03	0.00

LINK FLOW SUMMARIES AT TIME: 15. minutes

NODE		LINK Name		Typ	Speed	Satur	Ln	Lgth	Link Flow	V/C ratio	Total Time	Aver Time
Strt	End		S	P	(kph)	(vphg)	(#)	(m)	(vehs)	(#)	(min)	(min)
1	10	1 TO-ZONE1	101	1	70.0	2000.	2	1414.	37	0.04	53.	1.4
2	14	2 TO-ZONE2	101	1	70.0	2000.	2	1414.	36	0.04	52.	1.4
3	44	3 TO-ZONE3	101	1	70.0	2000.	1	900.	258	0.26	286.	1.1
4	17	4 TO-ZONE4	101	1	70.0	2000.	1	900.	181	0.18	188.	1.0
5	11	5 TO-ZONE5	101	1	70.0	2000.	1	1000.	63	0.06	66.	1.0
6	12	6 TO-ZONE6	101	1	70.0	2000.	1	1000.	68	0.07	75.	1.1
7	13	7 TO-ZONE7	101	1	70.0	2000.	1	1000.	60	0.06	63.	1.0
8	16	10 1ST AVENUE NB	1	2	50.0	1400.	1	1300.	28	0.04	52.	1.9
9	11	10 KINGSTON RD WB	1	1	60.0	1600.	1	2236.	16	0.04	44.	2.9
10	1	10 FR-ZONE1	1	1	70.0	2000.	2	1414.	184	0.18	301.	1.6
11	12	11 KINGSTON RD WB	2	1	60.0	1600.	1	2000.	0	0.00	0.	0.0
12	10	11 KINGSTON RD EB	2	1	60.0	1600.	1	2236.	107	0.26	382.	3.6
13	22	11 2ND AVENUE NB	2	2	50.0	1400.	1	300.	76	0.22	94.	1.2
14	5	11 FR-ZONE5	2	2	70.0	2000.	2	1000.	44	0.04	77.	1.8
15	28	12 3RD AVENUE NB	3	2	50.0	1400.	1	300.	45	0.13	23.	0.5
16	11	12 KINGSTON RD EB	3	1	60.0	1600.	1	2000.	17	0.04	41.	2.4
17	13	12 KINGSTON RD WB	3	1	60.0	1600.	1	2000.	16	0.04	41.	2.6
18	6	12 FR-ZONE6	3	2	70.0	2000.	2	1000.	66	0.07	71.	1.1
19	12	13 KINGSTON RD EB	4	1	60.0	1600.	1	2000.	0	0.00	0.	0.0
20	14	13 KINGSTON RD WB	4	1	60.0	1600.	1	2236.	113	0.28	363.	3.2
21	34	13 4TH AVENUE NB	4	2	50.0	1400.	1	300.	70	0.20	93.	1.3
22	7	13 FR-ZONE7	4	2	70.0	2000.	2	1000.	62	0.06	77.	1.2
23	40	14 5TH AVENUE NB	5	2	50.0	1400.	2	1300.	27	0.04	52.	1.9
24	13	14 KINGSTON RD WB	5	1	60.0	1600.	1	2236.	15	0.04	44.	2.9
25	2	14 FR-ZONE2	5	1	70.0	2000.	2	1414.	185	0.18	301.	1.6
26	10	15 1ST AVENUE SB	101	1	50.0	1400.	2	1300.	27	0.04	47.	1.7
27	19	16 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	32	0.09	8.	0.3
28	18	16 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
29	15	17 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	26	0.08	7.	0.3
30	18	17 QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	180	0.18	29.	0.1
31	23	18 QUEEN'S WAY WB1	101	1	110.0	2000.	2	1800.	182	0.18	237.	1.3
32	4	19 FR-ZONE4	101	1	70.0	2000.	4	900.	549	0.24	561.	1.0
33	15	20 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
34	19	20 QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	512	0.51	88.	0.2
35	11	21 2ND AVENUE SB	101	1	50.0	1400.	1	300.	119	0.34	64.	0.6
36	25	22 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	28	0.08	7.	0.3
37	24	22 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	66	0.19	22.	0.3
38	21	23 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	31	0.09	8.	0.3
39	24	23 QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	181	0.18	29.	0.1
40	29	24 QUEEN'S WAY WB2	101	1	110.0	2000.	2	1800.	254	0.25	347.	1.4
41	20	25 QUEEN'S WAY EB1	101	1	110.0	2000.	2	1800.	451	0.45	674.	1.5
42	21	26 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	88	0.25	29.	0.3
43	25	26 QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	418	0.42	68.	0.2
44	12	27 3RD AVENUE SB	101	1	50.0	1400.	1	300.	62	0.18	28.	0.4
45	31	28 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	23	0.07	6.	0.3
46	30	28 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	24	0.07	6.	0.3
47	27	29 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	31	0.09	8.	0.3
48	30	29 QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	242	0.26	39.	0.2
49	35	30 QUEEN'S WAY WB3	101	1	110.0	2000.	2	1800.	292	0.29	402.	1.4
50	26	31 QUEEN'S WAY EB2	101	1	110.0	2000.	2	1800.	434	0.43	660.	1.5
51	27	32 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	31	0.09	8.	0.3
52	31	33 QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	404	0.40	67.	0.2
53	13	33 4TH AVENUE SB	101	1	50.0	1400.	1	300.	122	0.35	67.	0.5
54	37	34 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	63	0.18	20.	0.3
55	36	34 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	28	0.08	7.	0.3
56	33	35 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	90	0.26	30.	0.3
57	34	35 QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	242	0.24	35.	0.1
58	41	36 QUEEN'S WAY WB4	101	1	110.0	2000.	2	1800.	273	0.27	344.	1.3

59	32	37	QUEEN'S WAY EB	101	1	110.0	2000.	2	1800.	344	0.37	546.	1.5
60	33	38	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	31	0.09	7.	0.2
61	37	38	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	295	0.29	46.	0.2
62	14	39	5TH AVENUE SB	101	1	50.0	1400.	2	1300.	27	0.04	47.	1.7
63	43	40	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
64	42	40	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	31	0.09	8.	0.3
65	39	41	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
66	42	41	QUEEN'S WAY NB	101	1	110.0	2000.	2	200.	307	0.31	47.	0.2
67	3	42	FR-ZONE3	101	1	70.0	2000.	4	1150.	341	0.15	415.	1.2
68	38	43	QUEEN'S WAY EB4	101	1	110.0	2000.	2	1800.	275	0.27	386.	1.4
69	39	44	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	27	0.08	7.	0.3
70	43	44	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	272	0.27	42.	0.2

Total link travel times	=	8358.	veh-mi n
	=	139.30	veh- hrs
Total network travel	=	8500.	veh-km
Total network length	=	59.85	km
Average network speed	=	61.	km/h
Average trip time/veh	=	1.2201	min
Average trip length/veh	=	1.2409	k m

Timing Optimization at 15. mins for Signal 1

p	a	appr	flow	satf	yapr	ycr1	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	182	1600	0.11	0.22	0.37	30	8	22	13	4	0	13
1	2	10	874	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	143	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 15. mins for Signal 2

p	a	appr	flow	satf	yapr	ycr1	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.45	0.87	120	8	112	58	4	0	58
1	2	12	721	1600	0.45	0.45	0.87	120	8	112	58	4	0	58
2	1	13	591	1400	0.42	0.42	0.87	120	8	112	54	4	62	116
2	2	14	287	4000	0.07	0.42	0.87	120	8	112	54	4	62	116

Timing Optimization at 15. mins for Signal 3

p	a	appr	flow	satf	yapr	ycr1	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	128	1600	0.08	0.15	0.34	30	8	22	10	4	0	10
1	2	17	110	1600	0.07	0.15	0.34	30	8	22	10	4	0	10
2	1	15	271	1400	0.19	0.19	0.34	30	8	22	12	4	14	26
2	2	18	287	4000	0.07	0.19	0.34	30	8	22	12	4	14	26

Timing Optimization at 15. mins for Signal 4

p	a	appr	flow	satf	yapr	ycr1	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.45	0.85	115	8	107	56	4	0	56
1	2	20	718	1600	0.45	0.45	0.85	115	8	107	56	4	0	56
2	1	21	563	1400	0.40	0.40	0.85	115	8	107	51	4	60	111
2	2	22	287	4000	0.07	0.40	0.85	115	8	107	51	4	60	111

Timing Optimization at 15. mins for Signal 5

p	a	appr	flow	satf	yapr	ycr1	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	211	1600	0.13	0.22	0.37	30	8	22	13	4	0	13
1	2	25	874	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	150	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 18. mins for Signal 1

P	A	appr	flow	satf	xapr	xcri	xsum	cyc	L	grn	grn	lgt	str	end
1	1	9	280	1600	0.17	0.23	0.38	56	8	22	13	4	0	13
1	2	10	914	4000	0.23	0.23	0.38	56	8	22	13	4	0	13
2	1	8	153	2800	0.05	0.15	0.38	56	8	22	9	4	17	26

Timing Optimization at 18. mins for Signal 2

P	A	appr	flow	satf	xapr	xcri	xsum	cyc	L	grn	grn	lgt	str	end
1	1	11	0	1600	0.00	0.46	0.94	120	8	112	[illegible]	4	0	[illegible]
1	2	12	744	1600	0.46	0.46	0.94	120	8	112	[illegible]	4	0	[illegible]
2	1	13	671	1600	0.48	0.48	0.94	120	8	112	[illegible]	4	[illegible]	[illegible]
2	2	14	303	4000	0.08	0.48	0.94	120	8	112	97	4	[illegible]	[illegible]

Timing Optimization at 18. mins for Signal 3

P	A	appr	flow	satf	xapr	xcri	xsum	cyc	L	grn	grn	lgt	str	end
1	1	16	110	1600	0.07	0.15	0.38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	2	17	152	1600	0.09	0.15	0.38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	1	15	288	1400	0.21	0.21	0.38	[illegible]	[illegible]	[illegible]	13	4	13	26
2	2	18	307	4000	0.08	0.21	0.38	56	8	22	13	4	13	26

Timing Optimization at 18. mins for Signal 4

P	A	appr	flow	satf	xapr	xcri	xsum	cyc	L	grn	grn	lgt	str	end
1	1	19	0	1600	0.00	0.46	0.89	120	8	112	[illegible]	4	0	[illegible]
1	2	20	743	1600	0.46	0.46	0.89	120	8	112	[illegible]	4	0	[illegible]
2	1	21	599	1400	0.43	0.43	0.89	120	8	112	[illegible]	4	[illegible]	[illegible]
2	2	22	307	4000	0.08	0.43	0.89	120	8	112	94	4	[illegible]	[illegible]

Timing Optimization at 18. mins for Signal 5

P	A	appr	flow	satf	xapr	xcri	xsum	cyc	L	grn	grn	lgt	str	end
1	1	24	212	1600	0.13	0.33	0.38	[illegible]	[illegible]	[illegible]	13	4	0	13
1	2	25	914	4000	0.23	0.33	0.38	[illegible]	[illegible]	[illegible]	13	4	0	13
2	1	23	144	2800	0.05	0.15	0.38	56	8	22	9	4	17	26

Timing Optimization at 21. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	224	1600	0.14	0.22	0.37	30	8	22	13	4	0	13
1	2	10	864	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	146	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 21. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.47	0.96	120	8	112	54	4	0	54
1	2	12	746	1600	0.47	0.47	0.96	120	8	112	54	4	0	54
2	1	13	697	1400	0.50	0.50	0.96	120	8	112	58	4	58	116
2	2	14	289	4000	0.07	0.50	0.96	120	8	112	58	4	58	116

Timing Optimization at 21. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	164	1600	0.10	0.15	0.35	30	8	22	9	4	0	9
1	2	17	164	1600	0.10	0.15	0.35	30	8	22	9	4	0	9
2	1	15	280	1400	0.20	0.20	0.35	30	8	22	13	4	13	26
2	2	18	304	4000	0.08	0.20	0.35	30	8	22	13	4	13	26

Timing Optimization at 21. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.46	0.89	120	8	112	58	4	0	58
1	2	20	737	1600	0.46	0.46	0.89	120	8	112	58	4	0	58
2	1	21	599	1400	0.43	0.43	0.89	120	8	112	54	4	62	116
2	2	22	291	4000	0.07	0.43	0.89	120	8	112	54	4	62	116

Timing Optimization at 21. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	168	1600	0.10	0.22	0.37	30	8	22	13	4	0	13
1	2	25	867	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	154	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 24. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	225	1600	0.18	0.23	0.38	30	8	22	13	4	0	13
1	2	10	922	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	8	155	2800	0.06	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 24. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.48	0.97	120	8	112	56	4	0	56
1	2	12	773	1600	0.48	0.48	0.97	120	8	112	56	4	0	56
2	1	13	686	1400	0.49	0.49	0.97	120	8	112	56	4	60	116
2	2	14	306	4000	0.08	0.49	0.97	120	8	112	56	4	60	116

Timing Optimization at 24. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	125	1600	0.08	0.15	0.37	30	8	22	9	4	0	9
1	2	17	125	1600	0.08	0.15	0.37	30	8	22	9	4	0	9
2	1	15	304	1400	0.22	0.22	0.37	30	8	22	13	4	13	26
2	2	18	307	4000	0.08	0.22	0.37	30	8	22	13	4	13	26

Timing Optimization at 24. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	1.01	120	8	112	52	4	0	52
1	2	20	754	1600	0.47	0.47	1.01	120	8	112	52	4	0	52
2	1	21	751	1400	0.54	0.54	1.01	120	8	112	60	4	56	116
2	2	22	308	4000	0.08	0.54	1.01	120	8	112	60	4	56	116

Timing Optimization at 24. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	289	1600	0.18	0.23	0.38	30	8	22	13	4	0	13
1	2	25	923	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	23	146	2800	0.05	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 27. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	225	1600	0.14	0.22	0.37	30	8	22	13	4	0	13
1	2	10	873	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	146	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 27. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.47	0.95	120	8	112	55	4	0	55
1	2	12	749	1600	0.47	0.47	0.95	120	8	112	55	4	0	55
2	1	13	676	1400	0.48	0.48	0.95	120	8	112	57	4	59	116
2	2	14	291	4000	0.07	0.48	0.95	120	8	112	57	4	59	116

Timing Optimization at 27. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	179	1600	0.11	0.15	0.36	30	8	22	9	4	0	9
1	2	17	155	1600	0.10	0.15	0.36	30	8	22	9	4	0	9
2	1	15	290	1400	0.21	0.21	0.36	30	8	22	13	4	13	26
2	2	18	291	4000	0.07	0.21	0.36	30	8	22	13	4	13	26

Timing Optimization at 27. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	0.91	120	8	112	58	4	0	58
1	2	20	750	1600	0.47	0.47	0.91	120	8	112	58	4	0	58
2	1	21	611	1400	0.44	0.44	0.91	120	8	112	54	4	62	116
2	2	22	306	4000	0.08	0.44	0.91	120	8	112	54	4	62	116

Timing Optimization at 27. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	247	1600	0.15	0.22	0.37	30	8	22	13	4	0	13
1	2	25	873	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	155	2800	0.06	0.15	0.37	30	8	22	9	4	17	26

ORIGIN DESTINATION TRIP TIMES IN MINUTES AFTER: 30. minutes

rigin	Destinations						
1	0.00	12.90	11.75	4.42	5.73	7.97	9.95
2	12.57	0.00	4.65	10.57	9.92	7.93	5.73
3	10.53	4.45	0.00	8.53	7.88	5.90	5.37
4	4.23	11.18	9.60	0.00	5.13	6.25	8.23
5	4.82	9.05	8.50	4.30	0.00	4.12	6.10
6	6.82	6.83	6.40	5.72	3.88	0.00	3.88
7	9.02	4.83	4.68	7.52	6.08	4.10	0.00

LINK FLOW SUMMARIES AT TIME: 30. minutes

	NODE Strt	NODE End	LINK Name		Typ	Sp	Speed (kph)	Satur (vphg)	Ln (#)	Lgth (m)	Link Flow (vehs)	V/C ratio (#)	Total Time (min)	Aver Time (min)
1	10	1	TO-ZONE1		101	1	70.0	2000.	2	1414.	133	0.07	189.	1.4
2	14	2	TO-ZONE2		101	1	70.0	2000.	2	1414.	128	0.06	181.	1.4
3	44	3	TO-ZONE3		101	1	70.0	2000.	1	900.	859	0.43	1009.	1.2
4	17	4	TO-ZONE4		101	1	70.0	2000.	1	900.	547	0.28	594.	1.0
5	11	5	TO-ZONE5		101	1	70.0	2000.	1	1000.	201	0.10	195.	1.0
6	12	6	TO-ZONE6		101	1	70.0	2000.	1	1000.	214	0.11	215.	1.0
7	13	7	TO-ZONE7		101	1	70.0	2000.	1	1000.	190	0.09	184.	1.0
8	16	10	1ST AVENUE	NB		1	50.0	1400.	2	1300.	65	0.05	119.	1.8
9	11	10	KINGSTON RD	WB		1	60.0	1600.	1	2236.	81	0.10	211.	2.6
10	1	10	FR-ZONE1			1	70.0	2000.	2	1414.	408	0.20	662.	1.6
11	12	11	KINGSTON RD	WB		2	60.0	1600.	1	2000.	0	0.00	0.	0.0
12	10	11	KINGSTON RD	EB		2	60.0	1600.	1	2236.	299	0.37	1107.	3.7
13	22	11	2ND AVENUE	NB		2	50.0	1400.	1	300.	237	0.34	457.	1.9
14	6	11	FR-ZONE5			2	70.0	2000.	2	1000.	138	0.07	163.	1.2
15	28	12	3RD AVENUE	NB		3	50.0	1400.	1	300.	119	0.17	63.	0.5
16	11	12	KINGSTON RD	EB		3	60.0	1600.	1	2000.	52	0.06	124.	2.4
17	13	12	KINGSTON RD	WB		3	60.0	1600.	1	2000.	52	0.06	121.	2.3
18	6	12	FR-ZONE6			3	70.0	2000.	2	1000.	140	0.07	146.	1.0
19	12	13	KINGSTON RD	EB		4	60.0	1600.	1	2000.	0	0.00	0.	0.0
20	14	13	KINGSTON RD	WB		4	60.0	1600.	1	2236.	299	0.37	1065.	3.6
21	34	13	4TH AVENUE	NB		4	50.0	1400.	1	300.	222	0.32	489.	2.2
22	7	13	FR-ZONE7			4	70.0	2000.	2	1000.	136	0.07	167.	1.2
23	40	14	5TH AVENUE	NB		5	50.0	1400.	2	1300.	65	0.05	117.	1.8
24	13	14	KINGSTON RD	WB		5	60.0	1600.	1	2236.	76	0.09	202.	2.7
25	2	14	FR-ZONE2			5	70.0	2000.	2	1414.	408	0.20	661.	1.6
26	10	15	1ST AVENUE	SB	101	1	50.0	1400.	2	1300.	64	0.05	109.	1.7
27	19	16	OFF RAMP	QUEEN'S	101	1	50.0	1400.	1	200.	69	0.10	17.	0.3
28	18	16	OFF RAMP	QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0

29	15	17	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	64	0.09	16.	0.3
30	18	17	QUEEN'S WAY WB 101	1	110.0	2000.	2	200.	529	0.26	78.	0.1
31	23	18	QUEEN'S WAY WB1 101	1	110.0	2000.	2	1800.	532	0.27	704.	1.3
32	4	19	FR-ZONE4 101	1	70.0	2000.	4	900.	1189	0.26	1207.	1.0
33	15	20	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
34	19	20	QUEEN'S WAY EB 101	1	110.0	2000.	2	200.	1112	0.56	191.	0.2
35	11	21	2ND AVENUE SB 101	1	50.0	1400.	1	300.	308	0.44	170.	0.6
36	25	22	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	64	0.09	18.	0.3
37	24	22	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	204	0.29	82.	0.4
38	21	23	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	68	0.10	17.	0.2
39	24	23	QUEEN'S WAY WB 101	1	110.0	2000.	2	200.	498	0.25	72.	0.1
40	29	24	QUEEN'S WAY WB2 101	1	110.0	2000.	2	1800.	718	0.36	1002.	1.4
41	20	25	QUEEN'S WAY EB1 101	1	110.0	2000.	2	1800.	1050	0.52	1607.	1.5
42	21	26	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	235	0.34	79.	0.3
43	25	26	QUEEN'S WAY EB 101	1	110.0	2000.	2	200.	977	0.49	161.	0.2
44	12	27	3RD AVENUE SB 101	1	50.0	1400.	1	300.	138	0.20	61.	0.4
45	31	28	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	60	0.09	15.	0.3
46	30	28	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	61	0.09	16.	0.3
47	27	29	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	68	0.10	17.	0.3
48	30	29	QUEEN'S WAY WB 101	1	110.0	2000.	2	200.	691	0.35	104.	0.2
49	35	30	QUEEN'S WAY WB3 101	1	110.0	2000.	2	1800.	761	0.38	1069.	1.4
50	26	31	QUEEN'S WAY EB2 101	1	110.0	2000.	2	1800.	1134	0.57	1826.	1.6
51	27	32	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	69	0.10	17.	0.2
52	31	32	QUEEN'S WAY EB 101	1	110.0	2000.	2	200.	1061	0.53	187.	0.2
53	13	33	4TH AVENUE SB 101	1	50.0	1400.	1	300.	307	0.44	172.	0.6
54	37	34	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	195	0.28	93.	0.5
55	36	34	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	58	0.08	37.	0.6
56	33	35	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	233	0.34	78.	0.3
57	36	35	QUEEN'S WAY WB 101	1	110.0	2000.	2	200.	566	0.28	84.	0.1
58	41	36	QUEEN'S WAY WB4 101	1	110.0	2000.	2	1800.	637	0.32	844.	1.3
59	32	37	QUEEN'S WAY EB3 101	1	110.0	2000.	2	1800.	1053	0.53	1678.	1.6
60	33	38	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	68	0.10	17.	0.3
61	37	38	QUEEN'S WAY EB 101	1	110.0	2000.	2	200.	840	0.42	137.	0.2
62	14	39	5TH AVENUE SB 101	1	50.0	1400.	2	1300.	64	0.05	109.	1.7
63	43	40	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
64	42	40	OFF RAMP QUEEN'S 101	1	50.0	1400.	1	200.	69	0.10	18.	0.3
65	39	41	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
66	42	41	QUEEN'S WAY WB 101	1	110.0	2000.	2	200.	668	0.33	102.	0.2
67	3	42	FR-ZONE3 101	1	70.0	2000.	4	1150.	742	0.16	890.	1.2
68	38	43	QUEEN'S WAY EB4 101	1	110.0	2000.	2	1800.	847	0.42	1261.	1.5
69	39	44	ON RAMP QUEEN'S W101	1	50.0	1400.	1	200.	64	0.09	16.	0.2
70	43	44	QUEEN'S WAY EB 101	1	110.0	2000.	2	200.	839	0.42	137.	0.2

Total link travel times	=	22960. veh-mi n
	=	382.66 veh- hrs
Total network travel	=	22375. veh-km
Total network length	=	59.85 km
Average network speed	=	58. km/h
Average trip time/veh	=	3.3518 min
Average trip length/veh	=	3.2664 k m

Timing Optimization at 30. mins for Signal 1

p	a	appr	flow	satf	yapr	ycrl	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	291	1600	0.18	0.23	0.38	30	8	22	13	4	0	13
1	2	10	922	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	8	155	2800	0.06	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 30. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.46	0.99	120	8	112	52	4	0	52
1	2	12	744	1600	0.46	0.46	0.99	120	8	112	52	4	0	52
2	1	13	742	1400	0.53	0.53	0.99	120	8	112	60	4	56	116
2	2	14	308	4000	0.08	0.53	0.99	120	8	112	60	4	56	116

Timing Optimization at 30. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	132	1600	0.08	0.15	0.37	30	8	22	9	4	0	9
1	2	17	122	1600	0.08	0.15	0.37	30	8	22	9	4	0	9
2	1	15	308	1400	0.22	0.22	0.37	30	8	22	13	4	13	26
2	2	18	308	4000	0.08	0.22	0.37	30	8	22	13	4	13	26

Timing Optimization at 30. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.46	1.00	120	8	112	52	4	0	52
1	2	20	742	1600	0.46	0.46	1.00	120	8	112	52	4	0	52
2	1	21	750	1400	0.54	0.54	1.00	120	8	112	60	4	56	116
2	2	22	303	4000	0.08	0.54	1.00	120	8	112	60	4	56	116

Timing Optimization at 30. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	300	1600	0.19	0.23	0.38	30	8	22	13	4	0	13
1	2	25	926	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	23	146	2800	0.05	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 33. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	248	1600	0.15	0.22	0.37	30	8	22	13	4	0	13
1	2	10	883	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	146	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 33. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.47	0.94	120	8	112	56	4	0	56
1	2	12	750	1600	0.47	0.47	0.94	120	8	112	56	4	0	56
2	1	13	665	1400	0.47	0.47	0.94	120	8	112	56	4	60	116
2	2	14	291	4000	0.07	0.47	0.94	120	8	112	56	4	60	116

Timing Optimization at 33. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	164	1600	0.10	0.15	0.36	30	8	22	9	4	0	9
1	2	17	163	1600	0.10	0.15	0.36	30	8	22	9	4	0	9
2	1	15	291	1400	0.21	0.21	0.36	30	8	22	13	4	13	26
2	2	18	291	4000	0.07	0.21	0.36	30	8	22	13	4	13	26

Timing Optimization at 33. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	0.91	120	8	112	58	4	0	58
1	2	20	753	1600	0.47	0.47	0.91	120	8	112	58	4	0	58
2	1	21	611	1400	0.44	0.44	0.91	120	8	112	54	4	62	116
2	2	22	289	4000	0.07	0.44	0.91	120	8	112	54	4	62	116

Timing Optimization at 33. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	260	1600	0.16	0.22	0.37	30	8	22	13	4	0	13
1	2	25	875	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	155	2800	0.06	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 36. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	301	1600	0.19	0.23	0.38	30	8	22	13	4	0	13
1	2	10	921	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	8	155	2800	0.06	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 36. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.46	1.04	120	8	112	50	4	0	50
1	2	12	744	1600	0.46	0.46	1.04	120	8	112	50	4	0	50
2	1	13	802	1400	0.57	0.57	1.04	120	8	112	62	4	54	116
2	2	14	305	4000	0.08	0.57	1.04	120	8	112	62	4	54	116

Timing Optimization at 36. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	125	1600	0.08	0.15	0.37	30	8	22	9	4	0	9
1	2	17	125	1600	0.08	0.15	0.37	30	8	22	9	4	0	9
2	1	15	311	1400	0.22	0.22	0.37	30	8	22	13	4	13	26
2	2	18	305	4000	0.08	0.22	0.37	30	8	22	13	4	13	26

Timing Optimization at 36. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.46	1.00	120	8	112	52	4	0	52
1	2	20	743	1600	0.46	0.46	1.00	120	8	112	52	4	0	52
2	1	21	750	1400	0.54	0.54	1.00	120	8	112	60	4	56	116
2	2	22	308	4000	0.08	0.54	1.00	120	8	112	60	4	56	116

Timing Optimization at 36. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	314	1600	0.20	0.23	0.38	30	8	22	13	4	0	13
1	2	25	926	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	23	146	2800	0.05	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 39. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	241	1600	0.15	0.22	0.37	30	8	22	13	4	0	13
1	2	10	887	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	146	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 39. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.47	0.93	120	8	112	56	4	0	56
1	2	12	750	1600	0.47	0.47	0.93	120	8	112	56	4	0	56
2	1	13	645	1400	0.46	0.46	0.93	120	8	112	56	4	60	116
2	2	14	290	4000	0.07	0.46	0.93	120	8	112	56	4	60	116

Timing Optimization at 39. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	170	1600	0.11	0.15	0.36	30	8	22	9	4	0	9
1	2	17	170	1600	0.11	0.15	0.36	30	8	22	9	4	0	9
2	1	15	293	1400	0.21	0.21	0.36	30	8	22	13	4	13	26
2	2	18	290	4000	0.07	0.21	0.36	30	8	22	13	4	13	26

Timing Optimization at 39. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	0.91	120	8	112	58	4	0	58
1	2	20	753	1600	0.47	0.47	0.91	120	8	112	58	4	0	58
2	1	21	611	1400	0.44	0.44	0.91	120	8	112	54	4	62	116
2	2	22	291	4000	0.07	0.44	0.91	120	8	112	54	4	62	116

Timing Optimization at 39. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	263	1600	0.16	0.22	0.37	30	8	22	13	4	0	13
1	2	25	875	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	155	2800	0.06	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 42. mins for Signal 1

p	a	appr flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	298 1600	0.19	0.23	0.38	30	8	22	13	4	0	13
1	2	10	923 4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	8	155 2800	0.06	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 42. mins for Signal 2

p	a	appr flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0 1600	0.00	0.46	1.02	120	8	112	51	4	0	51
1	2	12	742 1600	0.46	0.46	1.02	120	8	112	51	4	0	51
2	1	13	779 1400	0.56	0.56	1.02	120	8	112	61	4	55	116
2	2	14	308 4000	0.08	0.56	1.02	120	8	112	61	4	55	116

Timing Optimization at 42. mins for Signal 3

p	a	appr flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	128 1600	0.08	0.15	0.37	30	8	22	9	4	0	9
1	2	17	140 1600	0.09	0.15	0.37	30	8	22	9	4	0	9
2	1	15	312 1400	0.22	0.22	0.37	30	8	22	13	4	13	26
2	2	18	308 4000	0.08	0.22	0.37	30	8	22	13	4	13	26

Timing Optimization at 42. mins for Signal 4

p	a	appr flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0 1600	0.00	0.48	1.02	120	8	112	53	4	0	53
1	2	20	776 1600	0.48	0.48	1.02	120	8	112	53	4	0	53
2	1	21	750 1400	0.54	0.54	1.02	120	8	112	59	4	57	116
2	2	22	308 4000	0.08	0.54	1.02	120	8	112	59	4	57	116

Timing Optimization at 42. mins for Signal 5

p	a	appr flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	315 1600	0.20	0.23	0.38	30	8	22	13	4	0	13
1	2	25	926 4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	23	146 2800	0.05	0.15	0.38	30	8	22	9	4	17	26

ORIGIN DESTINATION TRIP TIMES IN MINUTES AFTER: 45. minutes

rigin	Destinations						
1	0.00	13.00	11.92	4.47	5.77	7.93	9.92
2	12.43	0.00	4.65	10.45	9.83	7.83	5.73
3	10.42	4.38	0.00	8.43	7.82	5.82	5.93
4	4.27	11.38	9.72	0.00	5.37	6.32	8.30
5	4.92	9.13	8.67	4.38	0.00	4.07	6.05
6	6.92	6.97	6.50	5.73	3.90	0.00	3.88
7	9.07	4.97	4.83	7.55	6.05	4.05	0.00

LINK FLOW SUMMARIES AT TIME: 45. minutes

NODE	LINK Name	Typ	Speed	Satur	Ln	Lgth	Link Flow	V/C ratio	Total Time	Aver Time

	Strt	End		S	P	(kph)	(vphg)	(#)	(m)	(vehs)	(#)	(min)	(min)
1	10	1	TO-ZONE1	101	1	70.0	2000.	2	1414.	244	0.08	325.	1.3
2	14	2	TO-ZONE2	101	1	70.0	2000.	2	1414.	244	0.08	326.	1.3
3	44	3	TO-ZONE3	101	1	70.0	2000.	2	900.	1484	0.49	1813.	1.2
4	17	4	TO-ZONE4	101	1	70.0	2000.	2	900.	965	0.32	1026.	1.1
5	11	5	TO-ZONE5	101	1	70.0	2000.	2	1000.	340	0.11	339.	1.0
6	12	6	TO-ZONE6	101	1	70.0	2000.	2	1000.	364	0.12	359.	1.0
7	13	7	TO-ZONE7	101	1	70.0	2000.	2	1000.	320	0.11	315.	1.0
8	16	10	1ST AVENUE NB		1	2	50.0	1400.	2	1300.	103	0.05	184.	1.8
9	11	10	KINGSTON RD WB		1	1	60.0	1600.	1	2236.	145	0.12	409.	2.8
10	1	10	FR-ZONE1		1	1	70.0	2000.	2	1414.	633	0.21	1022.	1.6
11	12	11	KINGSTON RD WB		2	1	60.0	1600.	1	2000.	0	0.00	0.	0.0
12	10	11	KINGSTON RD EB		2	1	60.0	1600.	1	2236.	469	0.38	1909.	4.1
13	22	11	2ND AVENUE NB		2	2	50.0	1400.	1	300.	422	0.41	895.	2.1
14	5	11	FR-ZONE5		2	2	70.0	2000.	2	1000.	215	0.07	246.	1.1
15	28	12	3RD AVENUE NB		3	2	50.0	1400.	1	300.	192	0.18	101.	0.5
16	11	12	KINGSTON RD EB		3	1	60.0	1600.	1	2000.	89	0.07	210.	2.4
17	13	12	KINGSTON RD WB		3	1	60.0	1600.	1	2000.	90	0.07	209.	2.3
18	6	12	FR-ZONE6		3	2	70.0	2000.	2	1000.	216	0.07	219.	1.0
19	12	13	KINGSTON RD EB		4	1	60.0	1600.	1	2000.	0	0.00	0.	0.0
20	14	13	KINGSTON RD WB		4	1	60.0	1600.	1	2236.	473	0.39	1856.	3.9
21	34	13	4TH AVENUE NB		4	2	50.0	1400.	1	300.	402	0.39	933.	2.3
22	7	13	FR-ZONE7		4	2	70.0	2000.	2	1000.	216	0.07	250.	1.2
23	40	14	5TH AVENUE NB		5	2	50.0	1400.	2	1300.	102	0.05	185.	1.8
24	13	14	KINGSTON RD WB		5	1	60.0	1600.	1	2236.	146	0.12	412.	2.8
25	3	14	FR-ZONE2		5	1	70.0	2000.	2	1414.	633	0.21	1022.	1.6
26	10	15	1ST AVENUE SB	101	1	50.0	1400.	2	1300.	107	0.05	170.	1.7
27	19	16	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	107	0.10	27.	0.2
28	18	16	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
29	15	17	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	101	0.10	26.	0.3
30	18	17	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	891	0.30	132.	0.1
31	23	18	QUEEN'S WAY WB1	101	1	110.0	2000.	2	1800.	896	0.30	1184.	1.3
32	4	19	FR-ZONE4	101	1	70.0	2000.	4	900.	1824	0.27	1859.	1.0
33	15	20	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
34	19	20	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	1712	0.57	297.	0.2
35	11	21	2ND AVENUE SB	101	1	50.0	1400.	1	300.	493	0.47	273.	0.6
36	25	22	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	102	0.10	37.	0.4
37	24	22	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	351	0.34	235.	0.7
38	21	23	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	106	0.10	26.	0.2
39	24	23	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	820	0.27	118.	0.1
40	29	24	QUEEN'S WAY WB2	101	1	110.0	2000.	2	1800.	1182	0.39	1676.	1.4
41	20	25	QUEEN'S WAY EB1	101	1	110.0	2000.	2	1800.	1649	0.55	2549.	1.5
42	21	26	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	386	0.37	127.	0.3
43	25	26	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	1541	0.51	255.	0.2
44	12	27	3RD AVENUE SB	101	1	50.0	1400.	1	300.	212	0.20	95.	0.4
45	31	28	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	98	0.09	24.	0.2
46	30	28	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	97	0.09	24.	0.2
47	27	29	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	106	0.10	26.	0.2
48	30	29	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	1113	0.37	164.	0.1
49	35	30	QUEEN'S WAY WB3	101	1	110.0	2000.	2	1800.	1210	0.40	1697.	1.4
50	26	31	QUEEN'S WAY EB2	101	1	110.0	2000.	2	1800.	1843	0.61	3023.	1.6
51	27	32	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	106	0.10	26.	0.2
52	31	32	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	1741	0.58	309.	0.2
53	13	33	4TH AVENUE SB	101	1	50.0	1400.	1	300.	497	0.48	276.	0.6
54	37	34	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	353	0.34	178.	0.5
55	36	34	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	80	0.08	196.	2.5
56	33	35	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	390	0.38	125.	0.3
57	36	35	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	849	0.28	126.	0.1
58	41	36	QUEEN'S WAY WB4	101	1	110.0	2000.	2	1800.	954	0.39	1380.	1.4
59	32	37	QUEEN'S WAY EB3	101	1	110.0	2000.	2	1800.	1763	0.59	2875.	1.6
60	33	38	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	106	0.10	26.	0.2
61	37	38	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	1402	0.47	231.	0.2
62	14	39	5TH AVENUE SB	101	1	50.0	1400.	2	1300.	102	0.05	170.	1.7
63	43	40	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
64	42	40	OFF RAMP QUEEN'S	101	1	50.0	1400.	1	200.	0	0.00	0.	0.0
65	39	41	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	106	0.10	27.	0.3
66	42	41	QUEEN'S WAY WB	101	1	110.0	2000.	2	200.	1032	0.34	158.	0.2
67	3	42	FR-ZONE3	101	1	70.0	2000.	4	1150.	1141	0.17	1364.	1.2
68	38	43	QUEEN'S WAY EB4	101	1	110.0	2000.	2	1800.	1443	0.48	2202.	1.5
69	39	44	ON RAMP QUEEN'S W	101	1	50.0	1400.	1	200.	101	0.10	25.	0.3
70	43	44	QUEEN'S WAY EB	101	1	110.0	2000.	2	200.	1437	0.48	236.	0.2

Total link travel times = 38540. veh-mi n
Total network travel = 642.33 veh- hrs
Total network length = 36360. veh-km
59.85 km

Average network speed = 57. km/h
Average trip time/veh = 5.6262 min
Average trip length. veh = 5.3080 k m

Timing Optimization at 45. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	236	1600	0.15	0.22	0.37	30	8	22	13	4	0	13
1	2	10	888	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	146	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 45. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.47	0.92	120	8	112	58	4	0	58
1	2	12	753	1600	0.47	0.47	0.92	120	8	112	58	4	0	58
2	1	13	623	1400	0.45	0.45	0.92	120	8	112	54	4	62	116
2	2	14	306	4000	0.08	0.45	0.92	120	8	112	54	4	62	116

Timing Optimization at 45. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	156	1600	0.10	0.15	0.32	30	8	22	10	4	0	10
1	2	17	168	1600	0.10	0.15	0.32	30	8	22	10	4	0	10
2	1	15	243	1400	0.17	0.17	0.32	30	8	22	12	4	14	26
2	2	18	291	4000	0.07	0.17	0.32	30	8	22	12	4	14	26

Timing Optimization at 45. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	0.90	120	8	112	59	4	0	59
1	2	20	750	1600	0.47	0.47	0.90	120	8	112	59	4	0	59
2	1	21	600	1400	0.43	0.43	0.90	120	8	112	53	4	63	116
2	2	22	306	4000	0.08	0.43	0.90	120	8	112	53	4	63	116

Timing Optimization at 45. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	269	1600	0.17	0.22	0.37	30	8	22	13	4	0	13
1	2	25	890	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	23	155	2800	0.06	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 48. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	296	1600	0.18	0.23	0.38	30	8	22	13	4	0	13

1	2	10	916	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	8	195	2800	0.06	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 48. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.46	1.00	120	8	112	52	4	0	52
1	2	12	743	1600	0.46	0.46	1.00	120	8	112	52	4	0	52
2	1	13	765	1400	0.54	0.54	1.00	120	8	112	60	4	48	116
2	2	14	307	4000	0.08	0.54	1.00	120	8	112	60	4	48	116

Timing Optimization at 48. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	134	1600	0.08	0.15	0.34	30	8	22	10	4	0	10
1	2	17	139	1600	0.09	0.15	0.34	30	8	22	10	4	0	10
2	1	15	273	1400	0.19	0.19	0.34	30	8	22	12	4	14	26
2	2	18	308	4000	0.08	0.19	0.34	30	8	22	12	4	14	26

Timing Optimization at 48. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	1.01	120	8	112	53	4	0	53
1	2	20	757	1600	0.47	0.47	1.01	120	8	112	53	4	0	53
2	1	21	746	1400	0.53	0.53	1.01	120	8	112	59	4	57	116
2	2	22	303	4000	0.08	0.53	1.01	120	8	112	59	4	57	116

Timing Optimization at 48. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	303	1600	0.19	0.23	0.38	30	8	22	13	4	0	13
1	2	25	917	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	23	146	2800	0.05	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 51. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	295	1600	0.15	0.22	0.37	30	8	22	13	4	0	13
1	2	10	886	4000	0.22	0.22	0.37	30	8	22	13	4	0	13
2	1	8	144	2800	0.05	0.15	0.37	30	8	22	9	4	17	26

Timing Optimization at 51. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.47	0.91	120	8	112	50	4	0	50
1	2	12	753	1600	0.47	0.47	0.91	120	8	112	50	4	0	50
2	1	13	613	1400	0.44	0.44	0.91	120	8	112	54	4	62	116
2	2	14	291	4000	0.07	0.44	0.91	120	8	112	54	4	62	116

Timing Optimization at 51. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	159	1600	0.10	0.15	0.31	30	8	22	11	4	0	11
1	2	17	161	1600	0.10	0.15	0.31	30	8	22	11	4	0	11
2	1	15	218	1400	0.16	0.16	0.31	30	8	22	11	4	15	26
2	2	18	291	4000	0.07	0.16	0.31	30	8	22	11	4	15	26

Timing Optimization at 51. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.47	0.90	120	8	112	49	4	0	49
1	2	20	751	1600	0.47	0.47	0.90	120	8	112	49	4	0	49
2	1	21	599	1400	0.43	0.43	0.90	120	8	112	53	4	63	116
2	2	22	302	4000	0.08	0.43	0.90	120	8	112	53	4	63	116

Timing Optimization at 51. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end

1	1	24	241	1600	0.15	0.22	0.37	30	8	32	13	4	0	13
1	2	25	884	4000	0.22	0.22	0.37	30	8	32	13	4	0	13
2	1	23	155	2800	0.06	0.15	0.37	30	8	32	9	4	17	26

Timing Optimization at 54. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	gmn	gmx	ign	str	end
1	1	9	287	1600	0.18	0.22	0.38	30	8	32	13	4	0	13
1	2	10	918	4000	0.22	0.22	0.38	30	8	32	13	4	0	13
2	1	8	155	2800	0.06	0.15	0.38	30	8	32	9	4	17	26

Timing Optimization at 54. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	gmn	gmx	ign	str	end
1	1	11	0	1600	0.00	0.47	1.01	120	8	112	65	4	0	69
1	2	12	765	1600	0.47	0.47	1.01	120	8	112	65	4	0	69
2	1	13	751	1400	0.54	0.54	1.01	120	8	112	65	4	56	116
2	2	14	308	4000	0.08	0.54	1.01	120	8	112	65	4	56	116

Timing Optimization at 54. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	gmn	gmx	ign	str	end
1	1	16	134	1600	0.08	0.15	0.32	30	8	22	10	4	0	10
1	2	17	136	1600	0.08	0.15	0.32	30	8	22	10	4	0	10
2	1	18	241	1400	0.17	0.17	0.32	30	8	22	12	4	14	26
2	2	18	308	4000	0.08	0.17	0.32	30	8	22	12	4	14	26

Timing Optimization at 54. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	gmn	gmx	ign	str	end
1	1	19	0	1600	0.00	0.44	1.00	120	8	112	65	4	0	69
1	2	20	744	1600	0.44	0.44	1.00	120	8	112	65	4	0	69
2	1	21	745	1400	0.53	0.53	1.00	120	8	112	65	4	56	116
2	2	22	305	4000	0.08	0.53	1.00	120	8	112	65	4	56	116

Timing Optimization at 54. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	gmn	gmx	ign	str	end
1	1	24	215	1600	0.20	0.22	0.38	30	8	32	13	4	0	13
1	2	25	923	4000	0.22	0.22	0.38	30	8	32	13	4	0	13
2	1	23	96	2800	0.03	0.15	0.38	30	8	32	9	4	17	26

Timing Optimization at 57. mins for Signal 1

D	R	appr	flow	satf	[appr	[cri	[sum	cyc	L	grn	ye	str	end
1	1	9	228	1600	0.14	0.22	0.37	100	8	22	4	4	17	26
1	2	10	869	4000	0.22	0.32	0.37	100	8	22	4	4	17	26
2	1	8	144	2800	0.05	0.19	0.37	100	8	22	4	4	17	26

Timing Optimization at 57. mins for Signal 2

D	R	appr	flow	satf	[appr	[cri	[sum	cyc	L	grn	ye	str	end
1	1	11	0	1600	0.00	0.47	0.92	120	8	112	4	4	0	57
1	2	12	744	1600	0.47	0.47	0.92	120	8	112	4	4	61	57
2	1	13	634	1600	0.40	0.45	0.92	120	8	112	4	4	61	116
2	2	14	291	4000	0.07	0.45	0.92	120	8	112	4	4	61	116

Timing Optimization at 57. mins for Signal 3

D	R	appr	flow	satf	[appr	[cri	[sum	cyc	L	grn	ye	str	end
1	1	16	167	1600	0.10	0.15	0.30	100	8	22	4	4	11	11
1	2	15	167	1600	0.10	0.15	0.30	100	8	22	4	4	11	11
2	1	17	291	1600	0.18	0.15	0.30	100	8	22	4	4	11	11
2	2	18	291	4000	0.07	0.15	0.30	100	8	22	4	4	11	11

Timing Optimization at 57. mins for Signal 4

D	R	appr	flow	satf	[appr	[cri	[sum	cyc	L	grn	ye	str	end
1	1	19	0	1600	0.00	0.41	0.90	120	8	112	4	4	0	57
1	2	20	758	1600	0.47	0.47	0.90	120	8	112	4	4	61	57
2	1	21	658	1600	0.41	0.43	0.90	120	8	112	4	4	61	116
2	2	22	290	4000	0.07	0.43	0.90	120	8	112	4	4	61	116

Timing Optimization at 57. mins for Signal 5

D	R	appr	flow	satf	[appr	[cri	[sum	cyc	L	grn	ye	str	end
1	1	24	243	1600	0.14	0.22	0.37	100	8	22	4	4	17	26
1	2	25	870	4000	0.22	0.32	0.37	100	8	22	4	4	17	26
2	1	23	118	2800	0.04	0.19	0.37	100	8	22	4	4	17	26

ORIGIN DESTINATION TRIP TIMES IN MINUTES AFTER: 60. minutes

rigin	Destinations						
1	0.00	12.90	11.78	4.38	5.22	7.93	2.93
2	12.90	0.00	4.63	10.83	9.97	7.97	4.73
3	11.47	4.38	0.00	9.40	9.05	7.05	4.22
4	4.23	11.23	9.42	0.00	4.98	6.28	8.28
5	4.83	9.08	8.50	4.10	0.00	4.08	4.08
6	6.83	6.85	6.42	5.43	3.88	0.00	3.88
7	9.07	4.88	4.70	7.07	6.12	4.12	0.00

LINK FLOW SUMMARIES AT TIME: 60. minutes

MODE Strt	MODE End	LINK Name	Typ	Lns	Speed (kph)	Satur (vphg)	Ln (m)	Lgth (m)	Link Flow (vehs)	V/C ratio (#)	Total Time (min)	Aver Time (min)
1	10	1 TO-ZONE1	101	1	70.0	2000.	2	1414.	344	0.09	471.	1.4
2	14	2 TO-ZONE2	101	1	70.0	2000.	2	1414.	344	0.09	476.	1.4
3	44	3 TO-ZONE3	101	1	70.0	2000.	2	990.	2122	0.33	2615.	1.2
4	17	4 TO-ZONE4	101	1	70.0	2000.	2	990.	1281	0.32	1349.	1.1
5	18	5 TO-ZONE5	101	1	70.0	2000.	2	1000.	485	0.12	472.	1.0
6	13	6 TO-ZONE6	101	1	70.0	2000.	2	1000.	446	0.12	491.	1.0
7	12	7 TO-ZONE7	101	1	70.0	2000.	2	1000.	455	0.11	442.	1.0
8	16	10 1ST AVENUE SB		2	50.0	1400.	1	1300.	140	0.05	2931.	1.8
9	11	10 KINGSTON RD WB		1	40.0	1600.	2	2236.	216	0.13	1380.	2.1
10	1	10 FB-ZONE1		1	70.0	2000.	2	1414.	888	0.21	1382.	1.4
11	12	11 KINGSTON RD EB		2	40.0	1600.	1	2000.	0	0.00	0.	0.0
12	10	11 KINGSTON RD WB		2	40.0	1600.	1	2236.	669	0.41	2669.	4.0
13	22	11 2ND AVENUE SB		2	50.0	1400.	1	300.	382	0.42	1328.	3.5
14	8	11 FB-ZONE5		2	70.0	2000.	2	1000.	288	0.07	1320.	4.6
15	28	12 3RD AVENUE SB		2	50.0	1400.	1	300.	251	0.18	1320.	5.3
16	11	12 KINGSTON RD WB		1	40.0	1600.	1	2000.	117	0.08	1320.	1.3
17	13	12 KINGSTON RD EB		1	40.0	1600.	1	2000.	117	0.08	1320.	1.3
18	6	12 FB-ZONE6		2	70.0	2000.	2	1000.	290	0.08	1320.	4.6
19	12	13 KINGSTON RD EB		1	40.0	1600.	1	2000.	0	0.00	0.	0.0
20	14	13 KINGSTON RD EB		1	40.0	1600.	1	2236.	674	0.41	2551.	3.8
21	36	13 4TH AVENUE SB		2	50.0	1400.	1	300.	540	0.46	1419.	2.6
22	7	13 FB-ZONE7		2	70.0	2000.	2	1000.	286	0.07	1319.	4.6
23	26	14 5TH AVENUE SB		2	50.0	1400.	1	1300.	133	0.05	2396.	1.8
24	13	14 KINGSTON RD WB		1	40.0	1600.	1	2236.	225	0.14	1438.	2.1
25	2	14 FB-ZONE2		2	70.0	2000.	2	1414.	888	0.21	1383.	1.4
26	10	15 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	1300.	139	0.10	2321.	1.7
27	18	16 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	0	0.00	0.	0.0
28	15	17 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	139	0.10	35.	0.2
29	17	17 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	1165	0.29	148.	0.1
30	25	17 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	1166	0.29	1821.	1.3
31	23	18 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	2444	0.61	3579.	1.8
32	4	18 FB-ZONE4	101	1	70.0	2000.	4	990.	0	0.00	0.	0.0
33	19	20 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	0	0.00	0.	0.0
34	19	20 QUEEN'S MAY EB	101	1	110.0	2000.	2	1800.	2312	0.58	443.	0.2
35	11	21 2ND AVENUE SB		2	50.0	1400.	1	300.	679	0.48	1380.	2.7
36	24	22 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	139	0.10	57.	0.4
37	24	22 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	474	0.34	352.	0.8
38	21	23 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	143	0.10	36.	0.2
39	21	23 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	1090	0.27	149.	0.1
40	25	23 QUEEN'S MAY WB2	101	1	110.0	2000.	2	1800.	1539	0.38	211.	0.1
41	25	23 QUEEN'S MAY EB2	101	1	110.0	2000.	2	1800.	2556	0.64	4219.	1.7
42	20	24 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	531	0.38	179.	0.3
43	20	24 QUEEN'S MAY EB	101	1	110.0	2000.	2	1800.	2102	0.53	349.	0.2
44	27	26 3RD AVENUE SB		2	50.0	1400.	1	300.	288	0.20	377.	0.8
45	28	27 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	117	0.08	57.	0.3
46	28	27 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	117	0.08	57.	0.3
47	26	28 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	143	0.10	36.	0.2
48	30	29 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	1416	0.35	2398.	1.7
49	30	29 QUEEN'S MAY WB3	101	1	110.0	2000.	2	1800.	1539	0.38	2141.	1.4
50	31	29 QUEEN'S MAY EB3	101	1	110.0	2000.	2	1800.	2554	0.64	4219.	1.7
51	33	30 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	143	0.10	36.	0.2
52	33	30 QUEEN'S MAY EB	101	1	110.0	2000.	2	1800.	2439	0.60	4219.	1.7
53	32	31 4TH AVENUE SB		2	50.0	1400.	1	300.	682	0.49	1382.	2.7
54	35	32 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	474	0.34	2788.	5.9
55	35	32 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	97	0.07	447.	4.6
56	34	33 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	282	0.20	176.	0.6
57	34	33 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	1038	0.26	144.	0.1
58	37	33 QUEEN'S MAY WB4	101	1	110.0	2000.	2	1800.	1148	0.29	2572.	2.2
59	37	33 QUEEN'S MAY EB3	101	1	110.0	2000.	2	1800.	2476	0.62	4057.	1.6
60	38	34 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	143	0.10	36.	0.2
61	38	34 QUEEN'S MAY EB	101	1	110.0	2000.	2	1800.	1943	0.48	2319.	1.2
62	39	36 5TH AVENUE SB		2	50.0	1400.	1	1300.	139	0.05	2321.	1.7
63	43	40 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	0	0.00	0.	0.0
64	42	40 OFF RAMP QUEEN'S	101	1	50.0	1400.	1	300.	128	0.10	33.	0.2
65	41	41 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	0	0.00	0.	0.0
66	42	41 QUEEN'S MAY WB	101	1	110.0	2000.	2	1800.	1265	0.32	490.	0.2
67	42	42 FB-ZONE3	101	1	70.0	2000.	4	1150.	1441	0.16	1923.	1.3
68	43	43 QUEEN'S MAY EB4	101	1	110.0	2000.	2	1800.	2044	0.51	3163.	1.5
69	44	44 ON RAMP QUEEN'S W	101	1	50.0	1400.	1	280.	139	0.10	35.	0.2
70	43	44 QUEEN'S MAY EB	101	1	110.0	2000.	2	1800.	2056	0.51	337.	0.2

Total link travel times = 54396. veh-mi n
= 906.63 veh- hrs
Total network travel = 49214. veh-km
Total network length = 59.85 km

Average network speed = 54. km/h
Average trip time/veh = 7.9413 min
Average trip length/veh = 7.1991 K m

Timing Optimization at 60. mins for Signal 1

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	9	301	1600	0.19	0.23	0.38	30	8	22	13	4	0	13
1	2	10	917	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	8	155	2800	0.06	0.15	0.38	30	8	22	9	4	17	26

Timing Optimization at 60. mins for Signal 2

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	11	0	1600	0.00	0.46	0.96	120	8	112	54	4	0	54
1	2	12	743	1600	0.46	0.46	0.96	120	8	112	54	4	0	54
2	1	13	689	1400	0.49	0.49	0.96	120	8	112	58	4	58	116
2	2	14	308	4000	0.08	0.49	0.96	120	8	112	58	4	58	116

Timing Optimization at 60. mins for Signal 3

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	16	123	1600	0.08	0.15	0.33	30	8	22	10	4	0	10
1	2	17	138	1600	0.09	0.15	0.33	30	8	22	10	4	0	10
2	1	15	244	1400	0.18	0.13	0.33	30	8	22	12	4	14	26
2	2	18	308	4000	0.08	0.18	0.33	30	8	22	12	4	14	26

Timing Optimization at 60. mins for Signal 4

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	19	0	1600	0.00	0.46	1.00	120	8	112	52	4	0	52
1	2	20	743	1600	0.46	0.46	1.00	120	8	112	52	4	0	52
2	1	21	749	1400	0.53	0.53	1.00	120	8	112	60	4	56	116
2	2	22	308	4000	0.08	0.53	1.00	120	8	112	60	4	56	116

Timing Optimization at 60. mins for Signal 5

p	a	appr	flow	satf	yapr	ycri	ysum	cyc	L	grn	grn	igr	str	end
1	1	24	322	1600	0.20	0.23	0.38	30	8	22	13	4	0	13
1	2	25	924	4000	0.23	0.23	0.38	30	8	22	13	4	0	13
2	1	23	73	2800	0.03	0.15	0.38	30	8	22	9	4	17	26

AVERAGE AND TOTAL O-D TRIP TIMES:

Origin Zone	Dest. Zone	Number of Vehicles Depart	Arrival	Enroute	Average Trip Time (minutes)	Total Trip Time (minutes)
1	2	150	108	42	16.7	1800.1
1	3	150	116	34	12.8	1491.5
1	4	150	139	11	4.4	620.0
1	5	150	134	16	6.6	877.4
1	6	150	128	22	8.5	1135.6
1	7	150	113	37	13.9	1568.5
2	1	150	109	41	16.3	1782.8
2	3	150	138	12	4.7	639.0
2	4	150	120	30	11.9	1406.2
2	5	150	115	35	13.3	1536.5
2	6	150	129	21	8.7	1122.1
2	7	150	135	15	6.4	861.6
3	1	150	107	43	12.9	1378.9
3	2	150	133	17	4.6	612.9
3	4	850	638	212	8.8	5617.3
3	5	150	110	40	10.1	1108.3
3	6	150	117	33	6.6	778.0
3	7	150	91	59	9.8	890.0
4	1	150	139	11	4.3	599.5
4	2	150	117	33	13.1	1534.4
4	3	1800	1510	290	9.3	14017.8
4	5	150	132	18	6.2	816.6
4	6	150	134	16	6.2	829.9
4	7	150	122	28	10.2	1245.6
5	3	150	127	23	8.4	1063.2
5	4	150	138	12	4.4	604.3
6	3	150	134	16	6.2	839.3
6	4	150	136	14	5.6	765.4
7	3	150	138	12	4.7	656.7
7	4	150	133	17	7.5	997.2

Sum of the total trip time = 49194.5 mins 819.91 hrs.
Average trip time = 8.72 mins 523. secs

Total demand to enter network = 6850
Vehicles entered network = 6850
Vehicles that completed trip = 5640
Vehicles left on network = 1210
Illegal network entries = 0

```
20:59:04.5880    0.0000   CSP
20:59:04.5883    0.0001   CSP
20:59:04.5887    0.0001   CSP
20:59:04.5890    0.0002   CSP
20:59:04.5895    0.0002   CSP
20:59:04.5900    0.0003   CSP
20:59:04.5903    0.0003   CSP
20:59:04.5906    0.0004   CSP
20:59:04.5909    0.0004   CSP
20:59:04.5913    0.0005   CSP
20:59:04.5916    0.0005   CSP
20:59:04.5923    0.0006   CSP
20:59:04.5926    0.0006   CSP
20:59:04.5929    0.0007   CSP
20:59:04.5932    0.0007   CSP
20:59:04.5936    0.0007   CSP
20:59:04.5939    0.0008   CSP
20:59:04.5946    0.0008   CSP
20:59:04.5957    0.0008   CSP
20:59:04.5961    0.0008   CSP
20:59:04.5964    0.0008   CSP
20:59:04.5970    0.0008   CSP
20:59:04.6769    0.0020   CSP
20:59:04.7073    0.0020   CSP
20:59:04.7078    0.0020   CSP
20:59:04.7085    0.0020   CSP
20:59:04.7088    0.0020   CSP
20:59:05.5521    0.0055   CSP
20:59:10.8203    0.0112   USER
20:59:55.5984    6.7561   USER
20:59:55.5990    6.7564   USER
20:59:55.5997    6.7567   USER
20:59:56.6004    6.7571   USER
20:59:56.7794    6.7599   CSP
21:00:25.4676    6.7600   SCP
21:00:25.4679    6.7600   SCP
21:00:25.4683    6.7600   SCP
21:00:25.4685    6.7600   SCP
21:00:25.4688    6.7600   SCP
21:00:27.7598    6.7605   CSP
21:00:27.8641    6.7616   USER
21:00:27.8645    6.7616   USER
21:00:41.1053    7.1781   CSP
21:00:46.5744    7.1782   SCP
21:00:46.5747    7.1782   SCP
21:00:46.5749    7.1782   SCP
21:00:46.5752    7.1782   SCP
21:00:47.5762    7.1785   SCP
21:00:48.6895    7.1785   SCP
21:00:56.7978    7.1785   SCP
21:00:56.7980    7.1785   SCP
21:00:56.7982    7.1785   SCP
21:00:56.7985    7.1785   SCP
21:01:01.1131    7.1785   SCP
21:01:01.7376    7.1788   SCP
21:01:11.6351    7.1788   SCP
21:01:11.6355    7.1788   SCP
21:01:11.6358    7.1788   SCP
21:01:11.6360    7.1788   SCP

21:01:15.6178    7.1788   SCP
21:01:17.0100    7.1791   SCP
21:01:24.3240    7.1791   SCP
21:01:24.3243    7.1791   SCP
21:01:24.3245    7.1791   SCP
21:01:24.3248    7.1791   SCP
21:01:29.0283    7.1791   SCP
21:01:31.0589    7.1795   CSP
21:01:40.5072    7.1795   SCP
21:01:40.5074    7.1795   SCP
21:01:40.5078    7.1795   SCP
21:01:40.5081    7.1795   SCP
21:01:43.5123    7.1795   SCP
21:01:45.1631    7.1798   CSP
21:01:51.9984    7.1799   SCP
21:01:51.9986    7.1799   SCP
21:01:51.9988    7.1799   SCP
21:01:51.9991    7.1799   SCP
21:01:56.3235    7.1799   SCP
21:01:58.3337    7.1801   CSP
21:02:06.4419    7.1802   SCP
21:02:06.4422    7.1802   SCP
21:02:06.4424    7.1802   SCP
21:02:06.4426    7.1802   SCP
21:02:09.6427    7.1802   SCP
21:02:11.3177    7.1803   CSP
21:02:27.2575   14.1860   CSP
21:02:27.4075   14.1887   CSP
21:02:27.4817   14.2071   USER
21:02:27.4847   14.2071   USER
21:02:27.4861   14.2071   CSP
21:02:27.4958   14.2072   CSP
21:02:27.4961   14.2072   CSP
21:02:27.5751   14.2074   USER
21:02:27.5755   14.2075   USER
21:02:27.5759   14.2075   USER
21:02:27.5764   14.2076   USER
21:02:27.5767   14.2076   USER
21:02:27.5773   14.2078   USER
21:02:27.5778   14.2079   USER
21:02:27.5783   14.2081   USER
21:02:27.5788   14.2082   USER
21:02:27.5793   14.2084   USER
21:02:27.5798   14.2086   USER
21:02:27.5803   14.2085   USER
21:02:27.5807   14.2086   USER
21:02:27.5811   14.2087   USER
21:02:27.5816   14.2088   USER
21:02:27.5820   14.2088   USER
21:02:27.5824   14.2089   USER
21:02:27.5829   14.2090   USER
21:02:27.5833   14.2091   USER
21:02:27.5838   14.2091   USER
21:02:27.5842   14.2092   USER
21:02:27.5846   14.2093   USER
21:02:27.5851   14.2093   USER
21:02:27.5855   14.2094   USER
21:02:27.5859   14.2094   USER
21:02:27.5864   14.2096   USER
21:02:27.5874   14.2096   USER
```

```
**********************************************************************
*                  Ontario Centre for Large Scale Computation        *
**********************************************************************

Use the JCL statement "CRAYNEWS." to print the following notices in full.

Num   Date         Subject
  1.  6-MAY-1987   CLSC ACCOUNTING.
  2.  6-MAY-1987   CRAY PM SCHEDULE.
  3.  25-MAY-1987  Subscribe to "The CLSC News".
  4.  28-AUG-1987  CRAYHELP.  jcl to get info on CLSC cray software
  5.  25-JAN-1988  NEWS account on var front-end
  6.  24-JUN-1989  Technical assistance is available.
  7.  19-JAN-1990  UNICOS testing is now in progress.
  8.  28-JAN-1990  AUTOTASKING is now available.
  9.  14-FEB-1990  Supercomputer User Group (Friday, 2:00 PM)

        Ontario Centre for Large Scale Computation                    02/19/90
        CRAY-XMP/24 (SN103/24/04)        COS 1.17 - UP30  BUILT  01/19/90

job,jn=simu,t=300.
account,ac=,us=,up=.

.....

cf77,on=fm,l=list.
FF001 - CF77      VERSION 3.1      09/29/89 12:47:16
FF002 - COMPILE TIME      6.750 SECONDS
FF003 - 2483 SOURCE LINES
FF004 - 0 ERRORS, 0 OTHER MESSAGES
FF005 - CODE: 2407 WORDS, DATA: 4274 WORDS
dispose,dn=list,text=.
SCX-S-TASK  Dataset disposed to remote task:
 %CX-S-IDENT  "Cray job: SIMU sequence no: 23524 dataset name: LIST
CRAY TO VAX: %RMS-S-NORMAL, normal successful completion
CRAY TO VAX: FILE=PLUTOSSIB0:[YSCOTTJC.LIST]SIM.STD;1
CRAY TO VAX: 185343 BYTES TRANSFERRED
segldr,cmd=.abs=sim.
SEGLDR Version 5.0  - 10/02/89    (Chg-05/15/88 Patch-14)
 (c) Copyright Cray Research, Inc., 1983, 1987
fetch,dn=gnet1,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]GNET1.DAT;1
VAX TO CRAY: 1912 BYTES TRANSFERRED
SS004 - DATASET RECEIVED FROM FRONT END
fetch,dn=gnet2,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]GNET2.DAT;6
VAX TO CRAY: 2696 BYTES TRANSFERRED
SS004 - DATASET RECEIVED FROM FRONT END
fetch,dn=gnet3,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]GNET3.DAT;2
VAX TO CRAY: 368 BYTES TRANSFERRED

SS004 - DATASET RECEIVED FROM FRONT END
fetch,dn=gnet4,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]GNET4.DAT;2
VAX TO CRAY: 1776 BYTES TRANSFERRED
SS004 - DATASET RECEIVED FROM FRONT END
fetch,dn=gnet51a,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]GNET51A.DAT;2
VAX TO CRAY: 80 BYTES TRANSFERRED
SS004 - DATASET RECEIVED FROM FRONT END
fetch,dn=mainpath,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]MAINPATH.DAT;1
VAX TO CRAY: 1840 BYTES TRANSFERRED
SS004 - DATASET RECEIVED FROM FRONT END
fetch,dn=ft01,text=.
Dataset transferred from remote task:
 VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
VAX TO CRAY: FILE=PLUTOSSIB2:[YSCOTTJC.PARKER]RUN1.DAT;7
VAX TO CRAY: 136 BYTES TRANSFERRED
SS004 - DATASET RECEIVED FROM FRONT END
sim.
rewind,dn=ft20:ft13.
copyd,i=ft13.
I0048 - COPY OF      1240 RECORDS       1 FILES COMPLETED
exit.
END OF JOB

  Job name -                                  SIMU
  User number -                               YCRAY
  Job class name -                            SHORT
  Job sequence number -                       23524

  Time executing in cpu -                     0000:00:14.2073
  Time waiting to execute -                   0000:02:32.2136
  Time waiting for I/O -                      0000:00:34.8548
  Time waiting semaphore -                    0000:00:00.0000
  Time waiting in input queue -               0000:00:00.2458
  Memory * CPU time (MWDS*sec) -                      5.64981
  Memory * I/O wait time (MWDS*sec) -                13.50417
  Memory * sem wait time (MWDS*sec) -                 0.00000
  Minimum job size (words) -                        50176
  Maximum job size (words) -                       521728
  Minimum field length (words) -                    45568
  Maximum field length (words) -                   516096
  Minimum JTA size (words) -                         4096
  Maximum JTA size (words) -                         6144
  Disk sectors moved -                              28045
  FSS sectors moved -                                   0
  User I/O requests -                                 570
  User I/O suspensions -                             6767
  Open calls -                                         37
  Close calls -                                        15
  Memory resident datasets -                            0
  Temporary datasets sectors used -                   808
```

```
21:02:27.5878   14.2097   USER        Permanent dataset sectors used -          92
21:02:27.5884   14.2098   USER        Permanent dataset sectors saved -          0
21:02:27.5892   14.2099   USER        Resource usage information not available.
21:02:27.5897   14.2100   USER        Sectors received from front end -          8
```

Appendix B

1 T R A N S Y T - 7 F — T R A F F I C S I G N A L S Y S T E M O P T I M I Z A T I O N P R O G R A M
ORELEASE 3 FEB,1983 VERSION 1.0
OSPONSORED BY:
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC OPERATIONS

DEVELOPED BY:
TRANSPORT AND ROAD RESEARCH LABORATORY
UNITED KINGDOM AND
TRANSPORTATION RESEARCH CENTER
UNIVERSITY OF FLORIDA

0

I N P U T D A T A R E P O R T F O R R U N 1

RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

OFIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

0 NETWORK CONTROL CARD

CARD NO.	CARD TYPE	MIN CYCLE	MAX CYCLE	CYCLE INCR.	SEC/ STEP CYCLE	SEC/ STEP NORMAL	LOST TIME	GREEN EXTEN.	STOP PENALTY	OUTPUT LEVEL	INITIAL TIMINGS	PERIOD LENGTH	SEC(0) PERC(1)	SPD(0) TIME(1)	ENGL(0) METR(1)	PUNCH DECK(1
1)	1	80	120	10	0	0	2	4	25	2	1	60	0	0	0	0

0+++ 106 +++ WARNING +
+ THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE 60 SECONDS.
IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS PER CYCLE.

0 LIST OF NODES TO BE OPTIMIZED

CARD NO.	CARD TYPE	
2)	2	1 2 3 4 0 0 0 0 0 0 0 0 0 0 0 0

0 SYSTEM MASTER DATA

CARD NO.	CARD TYPE	MASTER NODE	DEF. YELLOW	CLEARANCES ALL-RED	SYSTEM SATFLOW	EXTERNAL SPEED	SYSTEM PDF	FUEL FACTOR	VEHICLE LENGTH							
3)	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0— PROGRAM NOTE — INPUT UNITS WERE SPECIFIED AS FOLLOWS:

* SPEED/TRAVEL TIME IN SPEED
* ENGLISH/METRIC UNITS IN ENGLISH
* TIMING UNITS IN SECONDS

1RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

0 INTERSECTION 1

0 CONTROLLER TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
4)	13	1	4	1	18	4	52	4	38	4	0	0	0	0	0	0

0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT FLA
5)	21	1	1	1	2	0	10	102	104	0	0	0	0	0	0	0
6)	22	1	3	3	4	0	10	101	103	0	0	0	0	0	0	0
7)	23	1	5	5	6	0	15	105	106	107	108	0	0	0	0	0

0 LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
8)	28	101	400	3400	800	0	0	0	35	0	0	0	0	0	0	0
9)	28	102	400	1600	46	0	0	0	35	0	0	0	0	0	0	5
10)	28	103	766	3400	906	0	203	711	35	205	24	30	207	40	30	0
11)	28	104	766	1600	110	0	203	91	35	0	0	0	0	0	0	5
12)	28	105	0	3400	530	0	0	0	0	0	0	0	0	0	0	0
13)	28	106	0	950	48	0	0	0	0	0	0	0	0	0	0	5
14)	28	107	0	3400	334	0	0	0	0	0	0	0	0	0	0	0
15)	28	108	0	750	86	0	0	0	0	0	0	0	0	0	0	5

0 INTERSECTION 2

0 CONTROLLER TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
16)	13	2	0	1	8	4	80	4	8	12	4	0	0	0	0	0

0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT FLA
17)	21	2	1	1	2	0	10	202	204	0	0	0	0	0	0	0
18)	22	2	3	3	4	0	20	201	203	0	0	0	0	0	0	0
19)	23	2	5	6	7	0	24	205	207	0	0	0	0	0	0	0

0 LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
20)	28	201	766	3400	808	0	106	48	30	107	104	30	101	586	35	0
21)	28	202	766	1600	51	0	101	38	35	0	0	0	0	0	0	5
22)	28	203	762	3400	892	0	303	873	35	305	153	30	308	82	30	0
23)	28	204	762	1600	70	0	303	62	35	0	0	0	0	0	0	5
24)	28	205	0	700	72	0	0	0	0	0	0	0	0	0	0	0
25)	28	207	0	660	138	0	0	0	0	0	0	0	0	0	0	0

0 INTERSECTION 3

0 CONTROLLER TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
26)	14	3	102	1	12	4	41	4	12	4	39	4	0	0	0	0

0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT FLA
27)	21	3	1	1	2	0	10	302	304	0	0	0	0	0	0	0
28)	22	3	3	3	4	0	20	301	303	0	0	0	0	0	0	0
29)	23	3	5	5	6	0	10	306	308	0	0	0	0	0	0	0
30)	24	3	7	7	8	0	24	305	307	0	0	0	0	0	0	0

0 LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.

```
 31)     28     301     762    3400     973       0     201     533      35     205      14      30     207      64      30       0
 32)     28     302     762    1600     154       0     201     119      35       0       0       0       0       0       0       0
 33)     28     303     777    3400     941       0     403     567      35     405      10      30     407      46      30       5
 34)     28     304     777    1600      73       0     403      40      35       0       0       0       0       0       0       0
 35)     28     305       0    3400     886       0       0       0       0       0       0       0       0       0       0       5
 36)     28     306       0    1600     115       0       0       0       0       0       0       0       0       0       0       0
 37)     28     307       0    3400     658       0       0       0       0       0       0       0       0       0       0       5
 38)     28     308       0    1600      82       0       0       0       0       0       0       0       0       0       0       0
0
 INTERSECTION      4

0
 CARD    CARD    NODE   OFFSET/                 INTERVAL DURATIONS (SECS. OR PERCENT)      CONTROLLER TIMING DATA                                                                  DOUBL
 NO.     TYPE    NO.    YLD.PT.  REF INT  INT1     INT2     INT3     INT4     INT5     INT6     INT7     INT8     INT9     INT10    INT11    CYCL
 39)      13       4         82         1        8        4       56       24        4        8       12        4        0        0        0        0
1RUN TITLE:  DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS                                  0000000

 FIELDS:      1        2        3        4        5        6        7        8        9       10       11       12       13       14       15       16

0
 CARD    CARD    NODE   START    VARIAB.  YELLOW   ALL-RED  PHASE    TIMING   DATA
 NO.     TYPE    NO.    INTVL    INTVL    INTVL    INTVL    MINIM.   LINKS MOVING IN THIS PHASE .....                                                        CONT
                                                              SECS.                                                                                        FLA
 40)      21       4        1        1        2        0       10      402      404       0        0        0        0        0        0        0
 41)      22       4        3        3        5        0       29      401      403       0        0        0        0        0        0        0
 42)      23       4        6        6        8        0       24      405      407       0        0        0        0        0        0        0
0
 CARD    CARD    LINK   LINK     SAT.     TOTAL    MID-BLK. LINK DATA  FIRST INPUT LINK....  SECOND INPUT LINK....  THIRD INPUT LINK.....  QUEUE
 NO.     TYPE    NO.    LENGTH   FLOW     VOL.     VOL.     NO.      VOL.     SPD/TT   NO.      VOL.     SPD/TT   NO.      VOL.     SPD/TT   CAP.
 43)      28     401      777     3400      910        0      301      652       35      306      115       30      307      132       30       0
 44)      28     402      400     1600       67        0      301       51       35        0        0        0        0        0        0       5
 45)      28     403      400     3400      804        0        0        0       35        0        0        0        0        0        0       0
 46)      28     404        0     1600      109        0        0        0        0        0        0        0        0        0        0       5
 47)      28     405        0     1760       86        0        0        0        0        0        0        0        0        0        0       0
 48)      28     407        0     1840      312        0        0        0        0        0        0        0        0        0        0       0
0
 CARD    CARD    STPEN  LINK     LINK     LINK     LINK     STOP PENALTY LINK     MODIFIERS LINK     LINK     LINK     LINK     LINK     LINK     LIN
 NO.     TYPE    CONV   NO.      NO.      NO.      NO.      LINK NO.     LINK NO.     LINK NO.     NO.      NO.      NO.      NO.      NO.      NO.      NO
 49)      38     500      101      103      201      203      301      303      401      403        0        0        0        0        0        0
0
 CARD    CARD    LINK   LINK     LINK     LINK     LINK     GRAPH    PLOT     CARDS
 NO.     TYPE    NO.    NO.      NO.      NO.      NO.      LINK NO.     LINK NO.     LINK NO.     LINK NO.     LINK NO.     LINK NO.     LINK NO.     LINK NO.
 50)      40     403      401      303      301      203      201      103      101
0CARD    CARD                                              RUN CARD
 NO.     TYPE                                                                                    0        0        0        0        0        0
 51)      52       0        0        0        0        0        0        0        0        0        0        0        0        0        0        0
0--- PROGRAM NOTE --- A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES.
                     IF CARD TYPE 4 WAS INPUT, IT IS IGNORED.
0
0--- PROGRAM NOTE --- THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.
                     NO ERRORS DETECTED. TRANSYT-7F NOW BEGINS FINAL PROCESSING.
                     IF ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.
0--- PROGRAM NOTE --- THERE ARE A TOTAL OF   4 NODES AND  28 LINKS (INCLUDING BOTTLENECKS, IF ANY) IN THIS RUN.
0--- PROGRAM NOTE --- THERE WERE A TOTAL OF   1 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.
1RUN TITLE:  DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS      0000000
0
```

CYCLE EVALUATION SUMMARY PERFORMANCE

	CYCLE LENGTH (SEC)	STEP SIZE (STEPS)	AVERAGE DELAY (SEC/VEH)	PERCENT STOPS (%)	FUEL CONSUMPTION (GAL/HR)	PERFORMANCE INDEX	NUMBER SATURATED LINKS
0	80	27	18.30	55	119.1	172.6	0
0	90	30	19.64	54	121.3	173.5	0
0	100	33	22.51	53	126.9	177.8	0
0	110	37	22.97	52	126.9	176.7	0
0	120	40	25.65	51	132.5	180.6	1

BEST CYCLE LENGTH = 80 SEC.   CYCLE SENSITIVITY = 1.9 %

0--- PROGRAM NOTE --- TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND
HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

1DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

0<PERFORMANCE WITH OPTIMAL SETTINGS> 80 SECOND CYCLE 60 STEPS

0 NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
1	101	800	3400	47	60.65	4.63	2.81	0.10	2.91	13.1	497.8(62%)	11		32	8.27	42	101
1	102	46	1600	26	3.49	0.53	0.41	0.02	0.44	34.1	41.0(89%)	1		5	0.81	11	102
1	103	906	3400	53	131.17	4.89	0.99	0.15	1.14	4.5	150.8(17%)	4		61	6.97	42	103
1	104	110	1600	61	15.93	2.19	1.50	0.24	1.74	57.0	110.6(101%)	2		5	2.73	11	104
1	105	530	3400	47	0.0	3.21	3.10	0.11	3.21	21.8	409.6(77%)	9	>	0	4.61	27	105
1	106	48	950	15	0.0	0.26	0.25	0.01	0.26	19.3	33.1(69%)	1		5	0.37	27	106
1	107	334	3400	30	0.0	1.86	1.83	0.03	1.86	20.1	242.0(72%)	5	>	0	2.70	27	107
0 1 :		2860	MAX =	61	211.23	18.10	11.38	0.71	12.09	15.2	1548.4(54%)	1		5	0.74	27	108
															27.20	PI =	40.9
2	201	808	3400	52	116.98	7.56	4.00	0.14	4.14	18.5	506.6(63%)	12		61	11.19	37	201
2	202	51	1600	23	7.38	0.62	0.39	0.02	0.41	28.9	50.3(99%)	1		5	0.97	12	202
2	203	892	3400	58	128.59	6.60	2.64	0.20	2.84	11.5	318.3(36%)	7		61	9.33	37	203
2	204	70	1600	31	10.09	1.11	0.80	0.03	0.83	42.7	69.6(99%)	2		5	1.53	12	204
2	205	72	700	27	0.0	0.36	0.34	0.03	0.36	18.2	48.4(67%)	1	>	0	0.53	31	205
0 2 :	207	138	660	55	0.0	0.91	0.74	0.17	0.91	23.6	104.5(76%)	2	>	0	1.24	31	207
		2031	MAX =	58	263.05	17.16	8.91	0.58	9.49	16.8	1097.7(54%)				24.79	PI =	40.0
3	301	973	3400	82	140.27	9.99	5.04	0.91	5.94	22.0	500.0(51%)	11		61	13.42	30	301
3	302	154	1600	68	22.20	2.70	1.72	0.35	2.08	48.5	153.4(100%)	3		5	3.54	12	302
3	303	951	3400	79	138.58	8.64	3.92	0.74	4.66	17.8	373.5(40%)	9		62	11.50	30	303
3	304	73	1600	32	10.75	1.24	0.90	0.04	0.93	46.0	72.3(99%)	2		5	1.65	12	304
3	305	886	3400	76	0.0	6.30	5.70	0.61	6.30	25.6	762.1(86%)	17	>	0	8.83	28	305
3	306	115	1600	72	0.0	1.55	1.10	0.44	1.55	48.4	108.3(94%)	2	>	0	1.72	10	306
3	307	658	3400	57	0.0	4.06	3.88	0.18	4.06	22.2	520.2(79%)	12	>	0	5.86	28	307
0 3 :	308	82	1600	51	0.0	0.90	0.77	0.13	0.90	39.7	75.8(92%)	2		5	1.08	10	308
		3882	MAX =	82	311.79	35.38	23.03	3.41	26.44	24.5	2565.6(66%)	–			47.60	PI =	68.5
4	401	910	3400	52	134.01	7.13	3.03	0.14	3.17	12.6	398.4(44%)	10		62	10.32	43	401
4	402	67	1600	42	5.08	1.02	0.80	0.07	0.88	47.2	66.1(99%)	1		5	1.34	10	402
4	403	804	3400	46	60.95	4.51	2.69	0.10	2.78	12.5	487.4(61%)	11		32	8.10	43	403
4	404	109	1600	68	0.0	1.38	1.02	0.35	1.38	45.5	102.4(94%)	2		5	1.57	10	404
4	405	86	1760	15	0.0	0.46	0.45	0.01	0.45	19.0	59.0(69%)	1	>	0	0.66	27	405
4	407	312	1840	52	0.0	1.99	1.86	0.14	1.99	23.0	244.5(78%)	6	>	0	2.81	27	407
0 4 :		2288	MAX =	68	200.04	16.48	9.85	0.81	10.66	16.8	1357.8(59%)				24.82	PI =	44.7

1DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 80 SECOND CYCLE 60 STEPS

<SYSTEM WIDE TOTALS INCLUDING ALL LINKS>

	TOTAL DISTANCE TRAVELED (VEH-MI/H)	TOTAL TRAVEL TIME (VEH-H/H)	TOTAL UNIFORM DELAY (VEH-H/H)	TOTAL RANDOM DELAY (VEH-H/H)	TOTAL DELAY (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	TOTAL UNIFORM STOPS (VEH/H-%)	TOTAL FUEL CONSUM (GAL/H)	PERFORMANCE INDEX	SPEED (MI/H)	
0	986.11	87.12	53.16	5.51	58.68	19.10	6569.4(59%)	124.41	194.09	15.57	<TOTALS>

1DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 80 SECOND CYCLE 60 STEPS

0

TRANSYT-7F SIGNAL CONTROLLER SETTINGS

0

NETWORK-WIDE SIGNAL TIMING DATA

OSYSTEM CYCLE LENGTH = 80 SECONDS
OMASTER OFFSET REFERENCE LOCATION = INTERSECTION NO. 2
OALL OFFSETS ARE REFERENCED TO THE START OF INTERVAL NO. 1 AT THIS SIGNAL.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1

OINTERVAL NUMBER :	1	2	3	4	5	6	
OINTVL LENGTH(SEC):	7	4	38	4	23	4	
OINTVL LENGTH (%):	9	5	47	5	29	5	
OPIN SETTINGS (%):	100/0	9	14	61	66	95	
OPHASE START (PH#):	1		2		3		
OINTERVAL TYPE :	V	Y	V	Y	V	Y	
OLINKS MOVING :	102		101		105		
	104		103		106		
					107		
					108		

OOFFSET = 12 SEC. 15 %.
1DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 80 SECOND CYCLE 60 STEPS

INTERSECTION 2

OINTERVAL NUMBER :	1	2	3	4	5	6	7	
OINTVL LENGTH(SEC):	8	4	33	4	8	19	4	
OINTVL LENGTH (%):	10	5	41	5	10	24	5	
OPIN SETTINGS (%):	100/0	10	15	56	61	71	95	
OPHASE START (PH#):	1		2		3			
OINTERVAL TYPE :	V	Y	V	Y	F	V	Y	
OLINKS MOVING :	202		201		205			
	204		203		207			

OOFFSET = 0 SEC. 0 %.
OTHIS IS THE MASTER CONTROLLER.
0+++ 193 +++ WARNING +
+ THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 1.

INTERSECTION 3

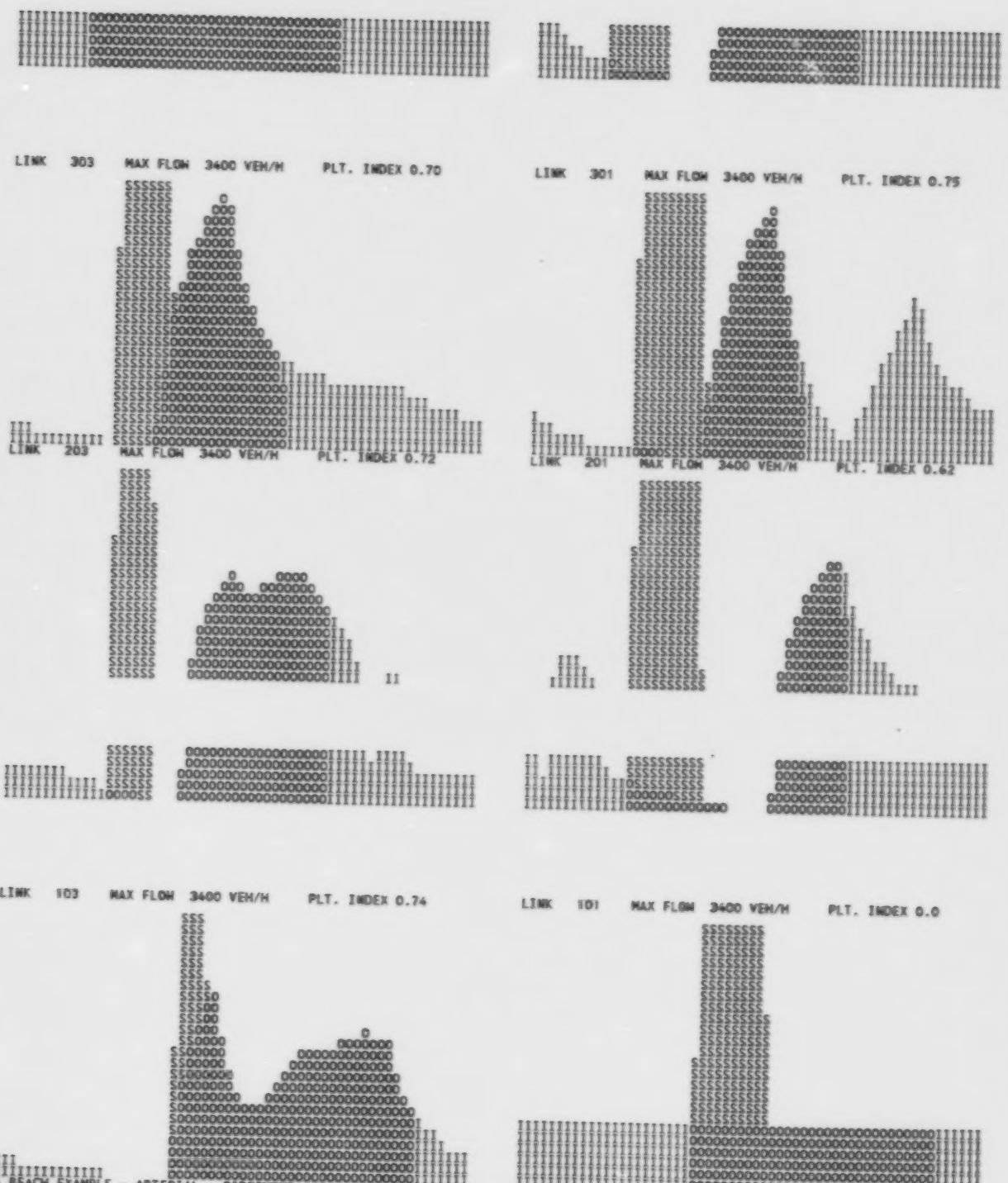
OINTERVAL NUMBER :	1	2	3	4	5	6	7	8	
OINTVL LENGTH(SEC):	8	4	26	4	6	4	24	4	
OINTVL LENGTH (%):	10	5	32	5	8	5	30	5	
OPIN SETTINGS (%):	100/0	10	15	47	52	60	65	95	
OPHASE START (PH#):	1		2		3		4		
OINTERVAL TYPE :	V	Y	V	Y	V	Y	V	Y	
OLINKS MOVING :	302		301		306		305		
	304		303		308		307		

OOFFSET = 0 SEC. 0 %.
0+++ 193 +++ WARNING +
+ THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 1.
1DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 80 SECOND CYCLE 60 STEPS

INTERSECTION 4

OINTERVAL NUMBER :	1	2	3	4	5	6	7	8	
OINTVL LENGTH(SEC):	6	4	15	24	4	11	12	4	
OINTVL LENGTH (%):	8	5	19	29	5	14	15	5	
OPIN SETTINGS (%):	100/0	8	13	32	61	66	80	95	
OPHASE START (PH#):	1		2			3			
OINTERVAL TYPE :	V	Y	V	F	Y	V	F	Y	
OLINKS MOVING :	402		401			405			
	404		403			407			

OOFFSET = 76 SEC. 95 %.
1 LINK 403 MAX FLOW 3400 VEH/H PLT. INDEX 0.0 LINK 401 MAX FLOW 3400 VEH/H PLT. INDEX 0.61


LINK 303 MAX FLOW 3400 VEH/H PLT. INDEX 0.70
LINK 301 MAX FLOW 3400 VEH/H PLT. INDEX 0.75
LINK 203 MAX FLOW 3400 VEH/H PLT. INDEX 0.72
LINK 201 MAX FLOW 3400 VEH/H PLT. INDEX 0.62
LINK 103 MAX FLOW 3400 VEH/H PLT. INDEX 0.74
LINK 101 MAX FLOW 3400 VEH/H PLT. INDEX 0.0

1DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS
0—— PROGRAM NOTE —— THIS IS THE INPUT DATA REPORT FOR TIME-SPACE DIAGRAM NO. 1
0 TIME-SPACE DIAGRAM DATA

CARD NO.	CARD TYPE	NO. NODES	TIME FLAG	TIME SCALE	DIST SCALE											
52)	60	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0

0 CARD NO. TITLE — PLOT TITLE CARD

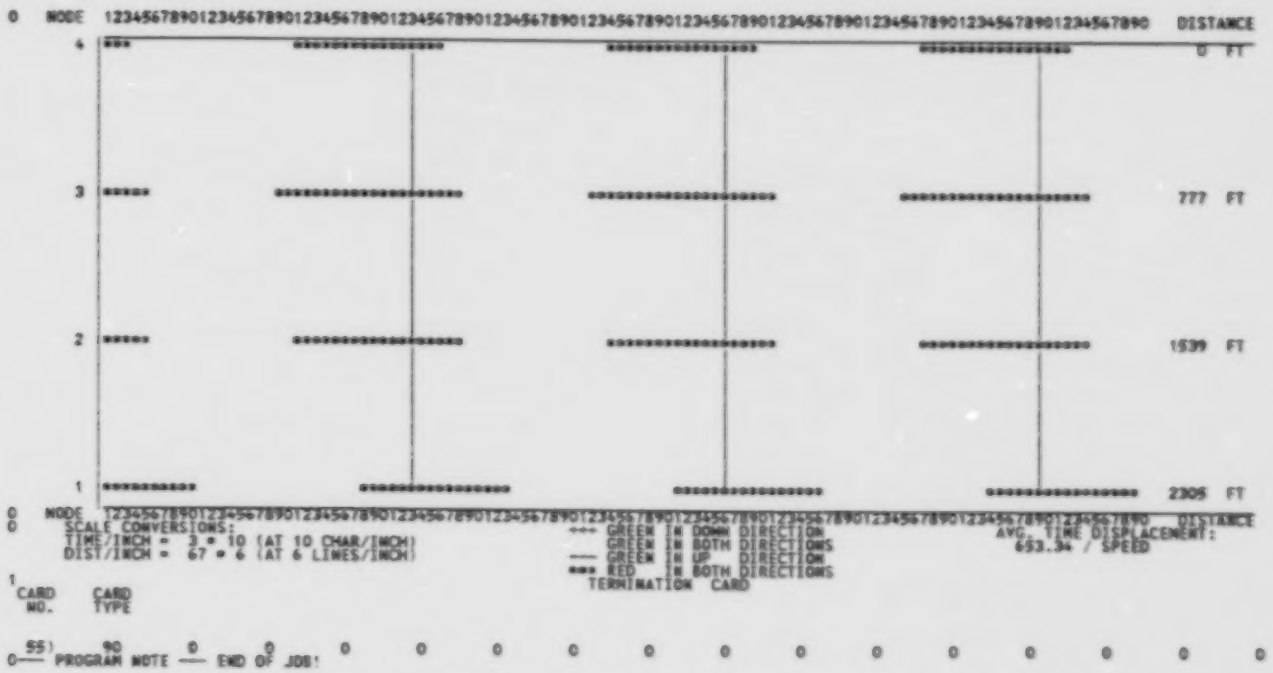
0 53) PLOT NODES: 1, 2, 3, 4.

0 CARD NO. CARD TYPE — LINK PAIRS ALTERNATING BY DIRECTION — PLOT LINK STREAM CARD 0000000 —

		DOWN	AND UP	DOWN	AND UP	DOWN	AND UP	DOWN	AND UP	DOWN	AND UP	DOWN	AND UP	DOWN	AND UP
54)	61	403	401	303	301	203	201	103	101	0	0	0	0	0	0	0

1 TRANSYT-7F TIME-SPACE DIAGRAM

0 DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 80 SECOND CYCLE 60 STEPS
0 PLOT NO. 1 PLOT TITLE: PLOT NODES: 1, 2, 3, 4.
TIME AXIS IS IN: % TIME SCALE = 3 %/CHAR, DIST. SCALE = 67 FT/LINE 0000000


0 NODE 1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890 DISTANCE
4
0 FT
3
777 FT
2
1539 FT
1
2305 FT
0 NODE 1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890 DISTANCE
0 SCALE CONVERSIONS:
TIME/INCH = 3 * 10 (AT 10 CHAR/INCH)
DIST/INCH = 67 * 6 (AT 6 LINES/INCH)
+++ GREEN IN DOWN DIRECTION
--- GREEN IN BOTH DIRECTIONS
--- GREEN IN UP DIRECTION
*** RED IN BOTH DIRECTIONS
TERMINATION CARD
AVG. TIME DISPLACEMENT:
653.34 / SPEED
1
CARD NO.
CARD TYPE
55)
90
0
0
0 PROGRAM NOTE — END OF JOB!
0 0 0 0 0 0 0 0 0 0 0 0 0 0

Appendix C

```
SEGLDR     Version 5.0     (Chg=05/15/88)                Job TRANS          02/16/90  12:06:20          Page 1

*Caution* Duplicate entry 'DATE' discovered:
     Entry in module 'DATE' from file '$BLD' is used
     Entry in module 'SDATE' from file '$UTLIB' is ignored
*Caution* Length of common block 'MEM' redefined larger by module
     'MODUL' from file '$BLD'
```

TRANSYT-7F — TRAFFIC SIGNAL SYSTEM OPTIMIZATION PROGRAM

RELEASE 3 FEB,1983 VERSION 2.1

SPONSORED BY:
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC OPERATIONS

DEVELOPED BY:
TRANSPORT AND ROAD RESEARCH LABORATORY
UNITED KINGDOM AND
TRANSPORTATION RESEARCH CENTER
UNIVERSITY OF FLORIDA

INPUT DATA REPORT FOR RUN 1

RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
							NETWORK CONTROL CARD									
CARD NO.	CARD TYPE	MIN CYCLE	MAX CYCLE	CYCLE INCR.	SEC/ STEP CYCLE	SEC/ STEP NORMAL	LOST TIME	GREEN EXTEN.	STOP PENALTY	OUTPUT LEVEL	INITIAL TIMINGS	PERIOD LENGTH	SEC(0) PERC(1)	SPD(0) TIME(1)	ENGL(0) METR(1)	PUNCH DECK(1)
1)	1	80	120	10	0	0	2	4	25	2	1	60	0	0	0	0

+++ 106 +++ WARNING - THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE 60 SECONDS.
IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS PER CYCLE.

CARD NO.	CARD TYPE						LIST OF NODES TO BE OPTIMIZED									
2)	2	1	2	3	4	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	MASTER NODE	DEF. YELLOW	CLEARANCES ALL-RED	SYSTEM SATFLOW	EXTERNAL SPEED	SYSTEM SYSTEM PDF	MASTER FUEL FACTOR	DATA VEHICLE LENGTH							
3)	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- INPUT UNITS WERE SPECIFIED AS FOLLOWS:

- SPEED/TRAVEL TIME IN SPEED
- ENGLISH/METRIC UNITS IN ENGLISH
- TIMING UNITS IN SECONDS

RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

INTERSECTION 1

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS, OR PERCENT) CONTROLLER TIMING DATA											DOUBLE CYCLE
					INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	
4)	13	1	4	1	18	4	52	4	38	4	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
5)	21	1	1	1	2	0	10	102	104	0	0	0	0	0	0	0
6)	22	1	3	3	4	0	10	101	103	0	0	0	0	0	0	0
7)	23	1	5	5	6	0	15	105	106	107	108	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST NO.	LINK DATA INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
8)	28	101	400	3400	800	0	0	0	35	0	0	0	0	0	0	0
9)	28	102	400	1600	44	0	0	0	35	0	0	0	0	0	0	5
10)	28	103	766	3400	904	0	703	711	35	205	24	30	207	40	30	5
11)	28	104	766	1600	110	0	203	91	35	0	0	0	0	0	0	5
12)	28	105	0	3400	530	0	0	0	0	0	0	0	0	0	0	0
13)	28	106	0	950	48	0	0	0	0	0	0	0	0	0	0	5
14)	28	107	0	3400	334	0	0	0	0	0	0	0	0	0	0	0
15)	28	108	0	750	86	0	0	0	0	0	0	0	0	0	0	5

INTERSECTION 2

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS, OR PERCENT) CONTROLLER TIMING DATA											DOUBLE CYCLE
					INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	
16)	13	2	0	1	8	4	80	4	8	12	4	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
17)	21	2	1	1	2	0	10	202	204	0	0	0	0	0	0	0
18)	22	2	3	3	4	0	20	201	203	0	0	0	0	0	0	0
19)	23	2	5	6	7	0	24	205	207	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST NO.	LINK DATA INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.

RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
20)	28	201	766	3400	808	0	106	48	30	107	104	30	101	586	35	0
21)	28	202	766	1600	51	0	101	38	35	0	0	0	0	0	0	5
22)	28	203	762	3400	892	0	303	873	35	305	153	30	308	82	30	5
23)	28	204	762	1600	70	0	303	62	35	0	0	0	0	0	0	5
24)	28	205	0	700	72	0	0	0	0	0	0	0	0	0	0	0
25)	28	207	0	660	138	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 3

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA (SECS. OR PERCENT) INTERVAL DURATIONS INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
26)	14	3	102	1	12	4	41	4	12	4	39	4	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
27)	21	3	1	1	2	0	10	302	304	0	0	0	0	0	0	0
28)	22	3	3	3	4	0	20	301	303	0	0	0	0	0	0	0
29)	23	3	5	5	6	0	10	306	308	0	0	0	0	0	0	0
30)	24	3	7	7	8	0	24	305	307	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
31)	28	301	762	3400	973	0	201	533	35	205	14	30	207	64	30	0
32)	28	302	762	1600	154	0	201	119	35	0	0	0	0	0	0	5
33)	28	303	777	3400	941	0	403	547	35	405	10	30	407	46	30	0
34)	28	304	777	1600	73	0	403	40	35	0	0	0	0	0	0	5
35)	28	305	0	1600	886	0	0	0	0	0	0	0	0	0	0	0
36)	28	306	0	1600	115	0	0	0	0	0	0	0	0	0	0	5
37)	28	307	0	3400	658	0	0	0	0	0	0	0	0	0	0	0
38)	28	308	0	1600	82	0	0	0	0	0	0	0	0	0	0	5

INTERSECTION 4

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA (SECS. OR PERCENT) INTERVAL DURATIONS INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
39)	13	4	82	1	8	4	56	24	4	8	12	4	0	0	0	0

RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
40)	21	4	1	1	2	0	10	402	404	0	0	0	0	0	0	0
41)	22	4	3	3	5	0	29	401	403	0	0	0	0	0	0	0
42)	23	4	6	6	8	0	24	405	407	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
43)	28	401	777	3400	910	0	301	652	35	306	115	30	307	132	30	0
44)	28	402	400	1600	67	0	301	51	35	0	0	0	0	0	0	5
45)	28	403	400	3400	804	0	0	0	35	0	0	0	0	0	0	5
46)	28	404	0	1600	109	0	0	0	0	0	0	0	0	0	0	0
47)	28	405	0	1760	86	0	0	0	0	0	0	0	0	0	0	0
48)	28	407	0	1840	312	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	STPEN CONV	LINK NO.	LINK NO.	LINK NO.	LINK NO.	STOP PENALTY LINK NO.	LINK NO.	MODIFIERS LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.
49)	38	500	101	103	201	203	301	303	401	403	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	GRAPH LINK NO.	PLOT LINK NO.	CARDS LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	
50)	40	403	401	303	301	203	201	103	101	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	RUN CARD														
51)	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES.
IF CARD TYPE 4 WAS INPUT, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

--- PROGRAM NOTE --- NO ERRORS DETECTED. TRANSYT-7F NOW BEGINS FINAL PROCESSING.
IF ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- PROGRAM NOTE --- THERE ARE A TOTAL OF 4 NODES AND 28 LINKS (INCLUDING BOTTLENECKS, IF ANY) IN THIS RUN.

--- PROGRAM NOTE --- THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.

RUN TITLE: DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000

CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (SEC)	STEP SIZE (STEPS)	AVERAGE DELAY (SEC/VEH)	PERCENT STOPS (%)	FUEL CONSUMPTION (GAL/HR)	PERFORMANCE INDEX	NUMBER SATURATED LINKS
80	27	18.40	56	119.7	176.4	0
90	30	20.25	55	123.0	176.3	0
100	33	21.95	54	125.9	176.3	0
110	37	23.00	52	127.1	176.2	0
120	40	25.57	52	133.0	184.1	1

BEST CYCLE LENGTH = 110 SEC. CYCLE SENSITIVITY = 2.1 %

--- PROGRAM NOTE --- TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 110 SECOND CYCLE 60 STEPS

<PERFORMANCE WITH OPTIMAL SETTINGS>

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
1	101	800	3400	35	60.65	3.38	1.63	0.04	1.67	7.5	315.3(39%)	10		32	5.95	76	101
1	102	46	1600	35	3.49	0.74	0.59	0.05	0.64	49.9	41.8(91%)	1		5	0.96	11	102
1	103	906	3400	40	131.16	4.81	0.99	0.06	1.06	4.2	145.0(16%)	4		61	6.86	76	103
1	104	110	1600	84	15.93	3.03	1.61	0.98	2.58	84.5	110.5(100%)	3		5	3.34	11	104
1	105	530	3400	82	0.00	7.04	6.15	0.89	7.04	47.8	493.3(93%)	15	>	0	7.88	23	105
1	106	48	950	26	0.00	0.51	0.49	0.02	0.51	38.2	39.6(82%)	1		5	0.59	23	106
1	107	334	3400	51	0.00	3.71	3.58	0.13	3.71	40.0	287.0(86%)	9	>	0	4.30	23	107
1	108	86	750	60	0.00	1.16	0.94	0.22	1.16	48.7	75.5(88%)	2		5	1.27	23	108
1 :		2860	MAX =	84	211.21	24.38	15.97	2.39	18.37	23.1	1508.0(53%)				31.17	PI =	41.6
2	201	808	3400	41	116.98	5.93	2.45	0.07	2.52	11.2	306.1(38%)	9		61	8.56	65	201
2	202	51	1600	39	7.38	1.13	0.86	0.06	0.92	65.1	51.1(100%)	2		5	1.35	11	202
2	203	892	3400	46	128.59	5.20	1.36	0.09	1.45	5.8	164.8(18%)	5		61	7.20	65	203
2	204	70	1600	53	10.09	1.72	1.28	0.15	1.43	73.8	69.6(99%)	2		5	1.97	11	204
2	205	72	700	35	0.00	0.64	0.60	0.05	0.64	32.2	54.6(76%)	2	>	0	0.77	34	205
2	207	138	660	72	0.00	1.74	1.29	0.45	1.74	45.4	118.4(86%)	4	>	0	1.93	34	207
2 :		2031	MAX =	72	263.03	16.37	7.84	0.87	8.70	15.4	764.6(38%)				21.77	PI =	27.1
3	301	973	3400	75	140.26	9.45	4.85	0.56	5.41	20.0	381.5(39%)	12		61	12.15	44	301
3	302	154	1600	88	22.20	4.79	2.76	1.40	4.16	97.2	153.4(100%)	5		5	5.07	14	302
3	303	941	3400	72	138.57	10.00	5.55	0.47	6.02	23.0	436.4(46%)	13		62	12.96	44	303
3	304	73	1600	42	10.75	1.52	1.14	0.07	1.22	60.1	72.2(99%)	2		5	1.86	14	304
3	305	886	3400	74	0.00	7.93	7.42	0.51	7.93	32.2	744.8(84%)	23	>	0	9.92	41	305
3	306	115	1600	88	0.00	2.89	1.58	1.30	2.89	90.5	111.9(97%)	3		5	2.73	11	306
3	307	658	3400	55	0.00	5.15	4.99	0.16	5.15	28.2	500.1(76%)	16	>	0	6.53	41	307
3	308	82	1600	63	0.00	1.36	1.11	0.26	1.36	59.8	77.2(94%)	2		5	1.42	11	308
3 :		3882	MAX =	88	311.78	43.09	29.41	4.74	34.14	31.7	2477.3(64%)				52.66	PI =	74.1
4	401	910	3400	43	134.01	5.25	1.22	0.08	1.30	5.1	151.7(17%)	5		62	7.21	71	401
4	402	67	1600	46	5.08	1.60	1.36	0.10	1.46	78.3	66.1(99%)	2		5	1.77	12	402
4	403	804	3400	38	60.95	3.92	2.14	0.05	2.20	9.8	366.9(46%)	11		32	6.74	71	403
4	404	109	1600	75	0.00	2.00	1.47	0.53	2.00	66.0	104.4(96%)	3		5	2.04	12	404
4	405	86	1760	21	0.00	0.81	0.80	0.01	0.81	34.0	66.6(77%)	2	>	0	0.96	27	405
4	407	312	1840	75	0.00	3.86	3.32	0.54	3.86	44.5	278.1(89%)	9	>	0	4.36	27	407
4 :		2288	MAX =	75	200.03	17.44	10.31	1.31	11.62	18.3	1033.9(45%)				23.09	PI =	33.2

<SYSTEM WIDE TOTALS INCLUDING ALL LINKS>

TOTAL DISTANCE TRAVELED (VEH-MI/H)	TOTAL TRAVEL TIME (VEH-H/H)	TOTAL UNIFORM DELAY (VEH-H/H)	TOTAL RANDOM DELAY (VEH-H/H)	TOTAL DELAY (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	TOTAL UNIFORM STOPS (VEH/H-%)	TOTAL FUEL CONSUM (GAL/H)	PERFORMANCE INDEX	SPEED (MI/H)
986.02	101.26	63.52	9.31	72.82	23.70	5783.0(52%)	128.67	175.96	15.79 <TOTALS>

DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 110 SECOND CYCLE 60 STEPS

TRANSYT-7F SIGNAL CONTROLLER SETTINGS

NETWORK-WIDE SIGNAL TIMING DATA

SYSTEM CYCLE LENGTH = 110 SECONDS
MASTER OFFSET REFERENCE LOCATION = INTERSECTION NO. 2
ALL OFFSETS ARE REFERENCED TO THE START OF INTERVAL NO. 1 AT THIS SIGNAL.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	7	4	72	4	19	4
INTVL LENGTH (%):	6	4	65	4	17	4
PIN SETTINGS (%):	100/0	6	10	75	79	96
PHASE START (PH#):	1		2		3	
INTERVAL TYPE :	V	Y	V	Y	V	Y
LINKS MOVING :	102 104		101 103		105 106 107 108	

OFFSET = 106 SEC. 96 %.

DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 110 SECOND CYCLE 60 STEPS

INTERSECTION 2

INTERVAL NUMBER :		1	2	3	4	5	6	7
INTVL LENGTH(SEC):		7	4	61	4	8	22	4
INTVL LENGTH (%):		6	4	55	4	7	20	4
PIN SETTINGS (%):	100/0	6	10	65	69	76	96	
PHASE START (PH#):		1		2		3		
INTERVAL TYPE :		V	Y	V	Y	F	V	Y
LINKS MOVING :		202 204		201 203		205 207		

OFFSET = 0 SEC. 0 %.

THIS IS THE MASTER CONTROLLER.

+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 1.

INTERSECTION 3

INTERVAL NUMBER :		1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):		10	4	40	4	7	4	37	4
INTVL LENGTH (%):		9	4	35	4	6	4	34	4
PIN SETTINGS (%):	100/0	9	13	48	52	58	62	96	
PHASE START (PH#):		1		2		3		4	
INTERVAL TYPE :		V	Y	V	Y	V	Y	V	Y
LINKS MOVING :		302 304		301 303		306 308		305 307	

OFFSET = 108 SEC. 98 %.

DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 110 SECOND CYCLE 60 STEPS

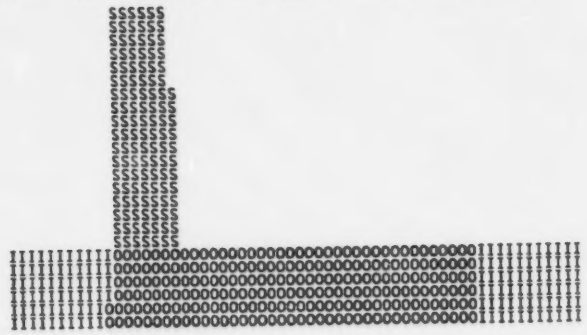
INTERSECTION 4

INTERVAL NUMBER :		1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):		8	4	43	24	4	11	12	4
INTVL LENGTH (%):		7	4	38	22	4	10	11	4
PIN SETTINGS (%):	100/0	7	11	49	71	75	85	96	
PHASE START (PH#):		1		2		3			
INTERVAL TYPE :		V	Y	V	F	Y	V	F	Y
LINKS MOVING :		402 404		401 403			405 407		

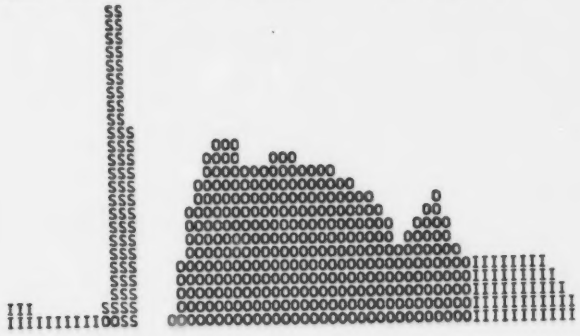
OFFSET = 0 SEC. 0 %.

+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 1.

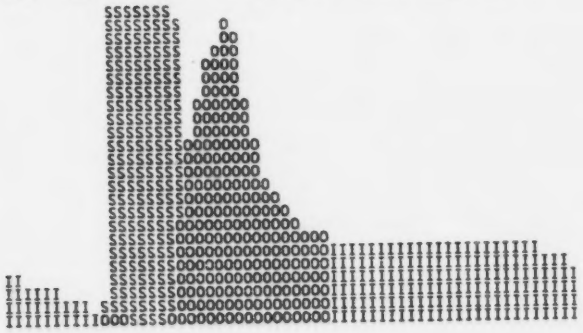
LINK 403 MAX FLOW 3400 VEH/H PLT. INDEX 0.00



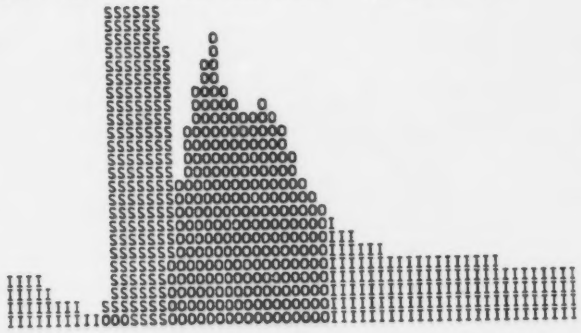
LINK 401 MAX FLOW 3400 VEH/H PLT. INDEX 0.64



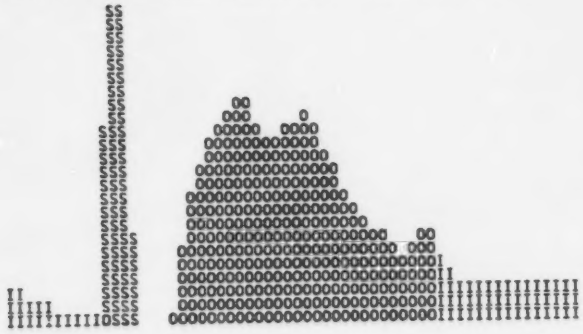
LINK 303 MAX FLOW 3400 VEH/H PLT. INDEX 0.54



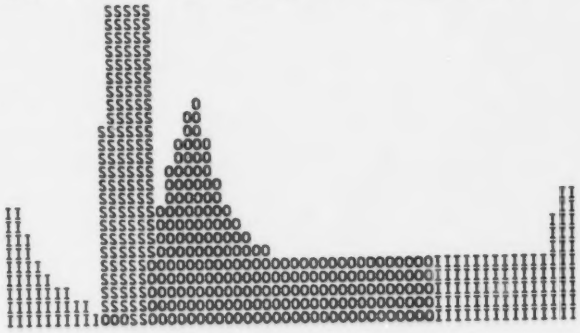
LINK 301 MAX FLOW 3400 VEH/H PLT. INDEX 0.66



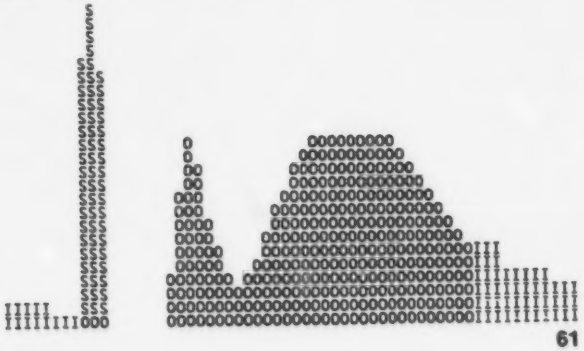
LINK 203 MAX FLOW 3400 VEH/H PLT. INDEX 0.74



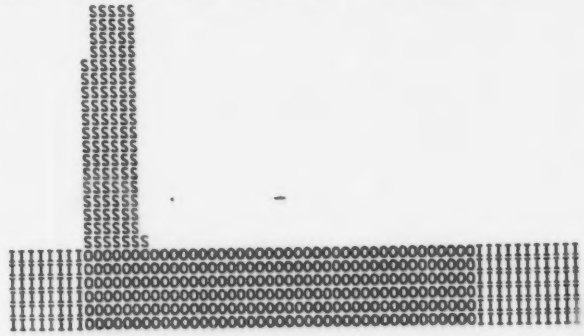
LINK 201 MAX FLOW 3400 VEH/H PLT. INDEX 0.45



LINK 103 MAX FLOW 3400 VEH/H PLT. INDEX 0.67



LINK 101 MAX FLOW 3400 VEH/H PLT. INDEX 0.00



DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 110 SECOND CYCLE 60 STEPS

--- PROGRAM NOTE --- THIS IS THE INPUT DATA REPORT FOR TIME-SPACE DIAGRAM NO. 1

TIME-SPACE DIAGRAM DATA

CARD NO.	CARD TYPE	NO. NODES	TIME FLAG	TIME SCALE	DIST. SCALE											
52)	60	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0

PLOT TITLE CARD

CARD NO.	TITLE
53)	PLOT NODES: 1, 2, 3, 4. 0000000

PLOT LINK STREAM CARD

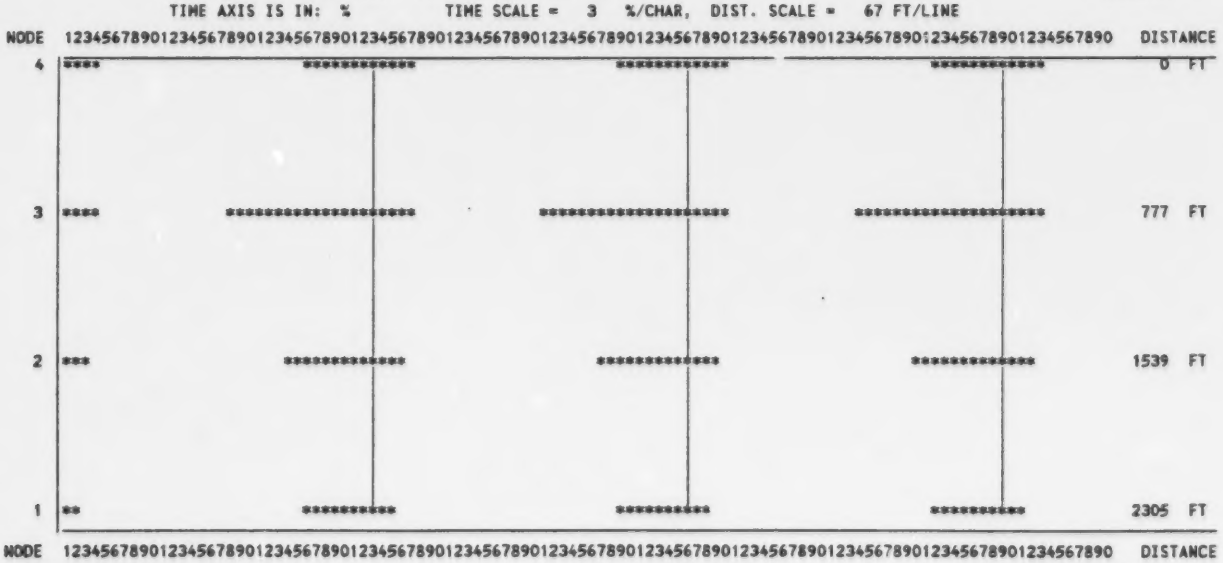
CARD NO.	CARD TYPE	LINK PAIRS ALTERNATING BY DIRECTION DOWN AND UP		DOWN AND UP		DOWN AND UP		DOWN AND UP		DOWN AND UP		DOWN AND UP		DOWN AND UP		
54)	61	403	401	303	301	203	201	103	101	0	0	0	0	0	0	0

T R A N S Y T - 7 F T I M E - S P A C E D I A G R A M

DAYTONA BEACH EXAMPLE - ARTERIAL - RIDGEWOOD AVE - BASE CONDITIONS 0000000 110 SECOND CYCLE 60 STEPS

PLOT NO. 1 PLOT TITLE: PLOT NODES: 1, 2, 3, 4. 0000000

TIME AXIS IS IN: % TIME SCALE = 3 %/CHAR, DIST. SCALE = 67 FT/LINE



SCALE CONVERSIONS:
TIME/INCH = 3 * 10 (AT 10 CHAR/INCH)
DIST/INCH = 67 * 6 (AT 6 LINES/INCH)

+++ GREEN IN DOWN DIRECTION
--- GREEN IN BOTH DIRECTIONS
___ GREEN IN UP DIRECTION
*** RED IN BOTH DIRECTIONS

AVG. TIME DISPLACEMENT:
- 475.14 / SPEED

TERMINATION CARD

```
CARD    CARD
 NO.    TYPE

 55)    90      0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0

--- PROGRAM NOTE --- END OF JOB!
```

```
12:02:05.4172       0.0000      CSP     ********************************************************************************
12:02:05.4179       0.0001      CSP     *                  Ontario Centre for Large Scale Computation                  *
12:02:05.4183       0.0001      CSP     ********************************************************************************
12:02:05.4186       0.0002      CSP
12:02:05.4190       0.0002      CSP     Use the JCL statement "CRAYNEWS." to print the following notices in full.
12:02:05.4193       0.0003      CSP
12:02:05.4196       0.0003      CSP     Num   Date         Subject
12:02:05.4202       0.0004      CSP       1.  6-MAY-1987   CLSC ACCOUNTING.
12:02:05.4206       0.0004      CSP       2.  6-MAY-1987   CRAY PM SCHEDULE.
12:02:05.4209       0.0005      CSP       3. 25-MAY-1987   Subscribe to "The CLSC News".
12:02:05.4213       0.0005      CSP       4. 28-AUG-1987   CRAYHELP.  jcl to get info on CLSC cray software
12:02:05.4216       0.0006      CSP       5. 25-JAN-1988   NEWS account on vax front-end
12:02:05.4220       0.0006      CSP       6. 26-JUN-1989   Technical assistance is available.
12:02:05.4226       0.0007      CSP       7. 19-JAN-1990   UNICOS testing is now in progress.
12:02:05.4230       0.0007      CSP       8. 28-JAN-1990   AUTOTASKING is now available.
12:02:05.4233       0.0008      CSP       9. 14-FEB-1990   Supercomputer User Group (Friday, 2:00 PM)
12:02:05.4237       0.0008      CSP
12:02:05.4255       0.0008      CSP             Ontario Centre for Large Scale Computation                    02/16/90
12:02:05.4260       0.0008      CSP
12:02:05.4266       0.0008      CSP             CRAY-XMP/24 (SN103/24/04)       COS 1.17 - UP3D  BUILT  01/19/90
12:02:05.4269       0.0008      CSP
12:02:05.4276       0.0008      CSP
12:02:05.4830       0.0008      CSP     job,jn=trans,t=100.
12:02:05.5936       0.0019      CSP     account,ac=,us=,upw=.
12:02:05.5949       0.0019      CSP
12:02:05.5952       0.0020      CSP     ..............................................................................
12:02:05.5955       0.0020      CSP
12:02:06.1895       0.0050      EXP     *delete,pdn=trans,id=trans.
12:02:06.1935       0.0053      CSP     fetch,dn=trans,text=.
12:03:04.9019       0.0053      SCP     Dataset transferred from remote task:
12:03:04.9022       0.0053      SCP      VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
12:03:04.9025       0.0053      SCP     VAX TO CRAY: FILE=PLUTO$SIB2:[YSCOTTJC.PARKER.TRANS]TRANS.FOR;5
12:03:04.9027       0.0053      SCP     VAX TO CRAY: 1025272 BYTES TRANSFERRED
12:03:08.7980       0.0053      SCP     SS004 - DATASET RECEIVED FROM FRONT END
12:03:09.5624       0.0053      EXP     *save,dn=trans,id=trans.
12:03:09.5629       0.0053      EXP     *access,dn=trans,id=trans.
12:03:09.6332       0.0059      CSP     cft77,e=4,i=trans,address=fast,trunc=32,integer=46.
12:03:15.6941       0.0116      USER    FF001 - CF177   VERSION 3.1      09/29/89 12:47:16
12:06:10.6336      33.4672      USER    FF002 - COMPILE TIME   33.461 SECONDS
12:06:10.6346      33.4675      USER    FF003 - 11670 SOURCE LINES
12:06:10.6352      33.4678      USER    FF004 - 0 ERRORS, 0 OTHER MESSAGES
12:06:10.6362      33.4682      USER    FF005 - CODE: 10641 WORDS, DATA: 11587 WORDS
12:06:11.0744      33.4709      CSP     fetch,dn=file,text=.
12:06:14.4488      33.4709      SCP     Dataset transferred from remote task:
12:06:14.4491      33.4709      SCP      VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
12:06:14.4493      33.4709      SCP     VAX TO CRAY: FILE=PLUTO$SIB2:[YSCOTTJC.PARKER.TRANS]FILE2.DAT;1
12:06:14.4499      33.4709      SCP     VAX TO CRAY: 4936 BYTES TRANSFERRED
12:06:18.7845      33.4709      SCP     SS004 - DATASET RECEIVED FROM FRONT END
12:06:19.8305      33.4709      CSP     assign,dn=file,a=ft05.
12:06:19.8342      33.4711      EXP     *dispose,dn=tt,text='usere:[yscottjc.list]trans.std'.       -
12:06:19.9302      33.4716      CSP     segldr,go.
12:06:24.8862      33.4728      USER    SG000 - SEGLDR Version 5.0  - 10/02/89     (Chg-05/15/88 Patch-14)
12:06:24.8866      33.4728      USER     (c) Copyright Cray Research, Inc., 1983, 1987
12:06:33.6692      33.8679      USER    SG030 - 2 caution errors encountered
12:06:33.6729      33.8681      USER    SG001 - Begin execution
12:06:36.2046      35.4669      USER    UT010 - STOP            in $MAIN
12:06:36.2088      35.4670      CSP     exit.
12:06:36.2092      35.4670      CSP     END OF JOB
12:06:36.2164      35.4670      CSP
```

```
12:06:36.2167   35.4670   CSP
12:06:36.3148   35.4672   USER    Job name -                                    TRANS
12:06:36.3152   35.4673   USER    User number -                                 YCRAY
12:06:36.3156   35.4674   USER    Job class name -                              SHORT
12:06:36.3161   35.4674   USER    Job sequence number -                         19861
12:06:36.3164   35.4674   USER
12:06:36.3169   35.4676   USER    Time executing in cpu -                 0000:00:35.4672
12:06:36.3175   35.4677   USER    Time waiting to execute -               0000:03:28.8227
12:06:36.3183   35.4679   USER    Time waiting for I/O -                  0000:00:24.5465
12:06:36.3188   35.4680   USER    Time waiting semaphore -                0000:00:00.0000
12:06:36.3193   35.4682   USER    Time waiting in input queue -           0000:00:00.0281
12:06:36.3203   35.4683   USER    Memory * CPU time (MWDS*sec) -                16.07588
12:06:36.3207   35.4684   USER    Memory * I/O wait time (MWDS*sec) -           10.17785
12:06:36.3211   35.4684   USER    Memory * sem wait time (MWDS*sec) -            0.00000
12:06:36.3216   35.4685   USER    Minimum job size (words) -                    50176
12:06:36.3221   35.4686   USER    Maximum job size (words) -                   634880
12:06:36.3228   35.4687   USER    Minimum field length (words) -                45568
12:06:36.3232   35.4687   USER    Maximum field length (words) -               629760
12:06:36.3237   35.4688   USER    Minimum JTA size (words) -                     4096
12:06:36.3241   35.4689   USER    Maximum JTA size (words) -                     6632
12:06:36.3245   35.4690   USER    Disk sectors moved -                          27477
12:06:36.3260   35.4690   USER    FSS sectors moved -                               0
12:06:36.3265   35.4691   USER    User I/O requests -                             535
12:06:36.3259   35.4692   USER    User I/O suspensions -                         6545
12:06:36.3263   35.4692   USER    Open calls -                                     30
12:06:36.3267   35.4693   USER    Close calls -                                     8
12:06:36.3272   35.4694   USER    Memory resident datasets -                        0
12:06:36.3276   35.4694   USER    Temporary datasets sectors used -               342
12:06:36.3280   35.4695   USER    Permanent dataset sectors used -                 92
12:06:36.3285   35.4696   USER    Permanent dataset sectors saved -                 0
12:06:36.3291   35.4697   USER    Resource usage information not available.
12:06:37.9994   35.4698   USER    Sectors received from front end -               253
```

Appendix D

```
1          TRANSYT-7F — TRAFFIC SIGNAL SYSTEM OPTIMIZATION PROGRAM
 RELEASE 2  FEB.1983                                                    VERSION 1.0
 SPONSORED BY:                                  DEVELOPED BY:
  FEDERAL HIGHWAY ADMINISTRATION                TRANSPORT AND ROAD RESEARCH LABORATORY
  OFFICE OF TRAFFIC OPERATIONS                  UNITED KINGDOM AND
                                                TRANSPORTATION RESEARCH CENTER
                                                UNIVERSITY OF FLORIDA
0
                          I N P U T   D A T A   R E P O R T   F O R   R U N   1

 RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
 OFFIELDS:    1     2     3     4     5     6     7     8     9     10    11    12    13    14    15    16
0                                          NETWORK CONTROL CARD
                                    SEC/                SEC/
  CARD   CARD    MIN    MAX  CYCLE  STEP   CYCLE  LOST  GREEN  STOP  OUTPUT INITIAL PERIOD SEC(O) SPD(O) ENGL(O) PUNCH
  NO.    TYPE   CYCLE  CYCLE INCR.  CYCLE NORMAL TIME  EXTEN. PENALTY LEVEL TIMINGS LENGTH PERC(I) TIME(I) METR(I) DECK(I
  1)     1      120    120    0      0      6      2     4     25     1     1       60     0      0      0      0
0*** 106 *** WARNING -
*              THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE  60 SECONDS.
*              IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS PER CYCLE.
0*** 110 *** WARNING -
*              INITIAL TIMINGS HAVE BEEN REQUESTED IN FIELD 11
*              TRANSYT-7F WILL IGNORE ANY OFFSET AND VARIABLE INTERVAL VALUES
*              CODED ON CARD TYPES 14 AND 18.
*              AN OPTIMIZATION RUN IS EXPECTED.
0CARD  CARD                                                 LIST OF MODES TO BE OPTIMIZED
  NO.  TYPE
  2)     2      1      2      3      4      5      6      7      8      9     10    11    12     0      0      0
0                                                 LINKS HAVING GUARD STOPLINES
  CARD   CARD    FIRST SET.....................  SECOND SET.....................  THIRD SET.....................
  NO.    TYPE
  3)     7      101    109    0      0      0      0      0      110    0     0     201   209    0      0      0
 RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
 FIELDS:      1     2     3     4     5     6     7     8     9     10    11    12    13    14    15    16
  4)     7      203    210    0      0      0      301    309    0     0     0     303   310    0      0      0
  5)     7      401    409    0      0      0      403    410    0     0     0     0     0      0      0      0
0                                                 SYSTEM MASTER  DATA
  CARD   CARD    MASTER  DEF. CLEARANCES SYSTEM  EXTERNAL SYSTEM FUEL  VEHICLE
  NO.    TYPE    MODE    YELLOW ALL-RED SATFLOW  SPEED    POP    FACTOR LENGTH
  6)     10      2       0      0       0        0        0      0      0     0     0     0     0      0      0      0
0*** PROGRAM NOTE *** INPUT UNITS WERE SPECIFIED AS FOLLOWS:
                       * SPEED/TRAVEL TIME      IN SPEED
                       * ENGLISH/METRIC UNITS   IN ENGLISH
                       * TIMING UNITS           IN SECONDS

0
 INTERSECTION    1
0                                          CONTROLLER TIMING DATA

  CARD   CARD    NODE   OFFSET/                INTERVAL DURATIONS (SECS. OR PERCENT)  ..........                                DOUBL
  NO.    TYPE    NO.    YLD.PT.  REF INT  INT1   INT2   INT3   INT4   INT5   INT6  INT7  INT8  INT9  INT10 INT11 CYCL
  7)     13      1      4        1        18     4      SEE    4      28     4     0     0     0     0     0     0
0                                                  PHASE  TIMING DATA
  CARD   CARD    NODE   START    VARIAB.  YELLOW ALL-RED MINIM.                LINKS MOVING IN THIS PHASE ..........      CONT
  NO.    TYPE    NO.    INTVL    INTVL    INTVL  INTVL  SECS.                                                            FLA
  8)     21      1      1        1        2      0      10     102    104    0     0     0     0     0     0     0
  9)     22      1      3        3        4      0      20     101    103    109   110   0     0     0     0     0
 10)     23      1      5        5        6      0      24     105    106    107   108   0     0     0     0     0
0                                                  LINK DATA
  CARD   CARD    LINK   LINK     SAT.     TOTAL  MID-BLK. FIRST INPUT LINK....  SECOND INPUT LINK....  THIRD INPUT LINK....  QUEUE
  NO.    TYPE    NO.    LENGTH   FLOW     VOL.   VOL.     NO.   VOL.   SPD/TT  NO.    VOL.   SPD/TT  NO.    VOL.   SPD/TT  CAP.
  11)    28      101    400      3400     800    0        0     0      35      0      0      0       0      0      0       0
  12)    28      102    400      1600     44     0        0     0      35      0      0      0       0      0      0       5
  13)    28      103    744      3400     956    20       203   711    35      205    24     30      207    40     30      0
  14)    28      104    744      1600     100    0        103   91     30      0      0      0       0      0      0       5
  15)    28      105    0        3400     530    0        0     0      0       0      0      0       0      0      0       5
  16)    28      106    0        950      48     0        0     0      0       0      0      0       0      0      0       5
0                                                  LINK DATA (CONTINUED)
  CARD   CARD    LINK   ADD START ADD CLEAR       FOURTH INPUT LINK
  NO.    TYPE    NO.    LOST-TIME UTILIZAT.       NO.    VOL.   SPD/TT
  17)    29      106    4         0              0      0      0       0     0     0     0     0     0      0      0
 RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
 FIELDS:      1     2     3     4     5     6     7     8     9     10    11    12    13    14    15    16
0                                                  LINK DATA
  CARD   CARD    LINK   LINK     SAT.     TOTAL  MID-BLK. FIRST INPUT LINK....  SECOND INPUT LINK....  THIRD INPUT LINK....  QUEUE
  NO.    TYPE    NO.    LENGTH   FLOW     VOL.   VOL.     NO.   VOL.   SPD/TT  NO.    VOL.   SPD/TT  NO.    VOL.   SPD/TT  CAP.
  18)    28      107    625      3400     334    0        202   33     30      503    49     30      507    212    30      0
  19)    28      108    625      750      84     0        201   76     30      0      0      0       0      0      0       5
0                                                  LINK DATA (CONTINUED)
  CARD   CARD    LINK   ADD START ADD CLEAR       FOURTH INPUT LINK
  NO.    TYPE    NO.    LOST-TIME UTILIZAT.       NO.    VOL.   SPD/TT
  20)    29      108    4         0              0      0      0       0     0     0     0     0     0      0      0
0                                                  LINK DATA
  CARD   CARD    LINK   LINK     SAT.     TOTAL  MID-BLK. FIRST INPUT LINK....  SECOND INPUT LINK....  THIRD INPUT LINK....  QUEUE
  NO.    TYPE    NO.    LENGTH   FLOW     VOL.   VOL.     NO.   VOL.   SPD/TT  NO.    VOL.   SPD/TT  NO.    VOL.   SPD/TT  CAP.
  21)    28      109    0        0        15     0        0     0      0       0      0      0       0      0      0       0
  22)    28      110    744      0        29     0        210   25     3029    0      0      0       0      0      0       0
0
 INTERSECTION    2
0                                          CONTROLLER TIMING DATA

  CARD   CARD    NODE   OFFSET/                INTERVAL DURATIONS (SECS. OR PERCENT)  ..........                                DOUBL
  NO.    TYPE    NO.    YLD.PT.  REF INT  INT1   INT2   INT3   INT4   INT5   INT6  INT7  INT8  INT9  INT10 INT11 CYCL
  23)    13      2      0        1        8      4      SEE    4      8      12    4     0     0     0     0     0
0                                                  PHASE  TIMING DATA
  CARD   CARD    NODE   START    VARIAB.  YELLOW ALL-RED MINIM.                LINKS MOVING IN THIS PHASE ..........      CONT
  NO.    TYPE    NO.    INTVL    INTVL    INTVL  INTVL  SECS.                                                            FLA
  24)    21      2      1        1        2      0      10     202    204    0     0     0     0     0     0     0
```

```
 25)  22    2    3    3    4    0   20  201  203  209  210    0    0    0    0    0
 26)  23    2    5    6    7    0   24  205  207    0    0    0    0    0    0    0
0                                          LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  CAP.
 27)  28   201    766    200    808      0   106    48    30   107   104    30   101   586    35     0
0+++ 137 +++ WARNING -
+                    THE VALUE IN FIELD 4,  200, IS LESS THAN 400.  A VALUE LESS THAN 400 IS
                     INTERPRETED AS THE NUMBER OF LANES X 100.

                     NOTE: THIS MESSAGE IS NOT REPEATED EACH TIME THIS USE
                           OCCURS, SO CHECK YOUR DATA!
 28)  28   202    766     94     51      0   101    38    35     0     0     0     0     0     0     5
 29)  28   203    762    200    892      0   303   873    35   305   153    30   308   812    30     0
 30)  28   204    762     94     70      0   303    62    35     0     0     0     0     0     0     0
 31)  28   205      0     41     72      0     0     0     0     0     0     0     0     0     0     0
1RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:  1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16

0                                          LINK DATA (CONTINUED)
CARD   CARD   LINK ADD START ADD CLEAR                FOURTH INPUT LINK
NO.    TYPE   NO. LOST-TIME UTILIZAT.                  NO.   VOL.  SPD/TT
 32)  29   205    2     0     0     0     0     0     0     0     0     0     0     0     0     0
0                                          LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  CAP.
 33)  28   207    630     39    138      0   607    65    30   603    49    30   602    24    30     0
 34)  28   209    766      0     15      0   109    15  3030     0     0     0     0     0     0     0
 35)  28   210    762      0     25      0   310    25  3000     0     0     0     0     0     0     0
0
INTERSECTION    3
0                                          CONTROLLER TIMING DATA
CARD   CARD   NODE  OFFSET/                INTERVAL DURATIONS (SECS, OR PERCENT)                                  DOUBL
NO.    TYPE   NO.  YLD.PT.  REF INT  INT1   INT2   INT3   INT4   INT5   INT6   INT7   INT8   INT9   INT10  INT11  CYCL
 36)  14    3    102     1     12     4     41     4     12     4     39     4     0     0     0     0
0                                          PHASE TIMING DATA
CARD   CARD   NODE  START  VARIAB. YELLOW ALL-RED MINIM.                                                          CONT
NO.    TYPE   NO.  INTVL   INTVL  INTVL  INTVL  SECS.   LINKS MOVING IN THIS PHASE .....                        FLA
 37)  21    3    1     1     2     0     10   302   304     0     0     0     0     0     0     0
 38)  22    3    3     3     4     0     20   301   303   309   310     0     0     0     0     0
 39)  23    3    5     5     6     0     10   306   308     0     0     0     0     0     0     0
 40)  24    3    7     7     8     0     24   305   307     0     0     0     0     0     0     0
0                                          LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  CAP.
 41)  28   301    762   3400    973      0   201   533    35   205    14    30   207    64    30     0
 42)  28   302    762   1600    154      0   201   119    35     0     0     0     0     0     0     5
 43)  28   303    777   3400    941      0   403   547    35   405    10    30   407    46    30     0
 44)  28   304    777   1600    173      0   403    40    35     0     0     0     0     0     0     5
 45)  28   305      0   3400    884      0     0     0     0     0     0     0     0     0     0     0
 46)  28   306      0   1600    115      0     0     0     0     0     0     0     0     0     0     0
 47)  28   307    650   3400    658      0   707   341    30   702    63    30   703    40    30     0

 48)  28   308    650   1600     82      0   707    79    30     0     0     0     0     0     0     5
 49)  28   309    762      0     15      0   209    15  3000     0     0     0     0     0     0     0
 50)  28   310    777      0     25      0   410    25  3030     0     0     0     0     0     0     0
0
INTERSECTION    4
1RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:  1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16

0                                          CONTROLLER TIMING DATA
CARD   CARD   NODE  OFFSET/                INTERVAL DURATIONS (SECS, OR PERCENT)                                  DOUBL
NO.    TYPE   NO.  YLD.PT.  REF INT  INT1   INT2   INT3   INT4   INT5   INT6   INT7   INT8   INT9   INT10  INT11  CYCL
 51)  13    4     82     1      8     4     56    24     4     8     12     4     0     0     0     0
0                                          PHASE TIMING DATA
CARD   CARD   NODE  START  VARIAB. YELLOW ALL-RED MINIM.                                                          CONT
NO.    TYPE   NO.  INTVL   INTVL  INTVL  INTVL  SECS.   LINKS MOVING IN THIS PHASE .....                        FLA
 52)  21    4    1     1     2     0     10   402   404     0     0     0     0     0     0     0
 53)  22    4    3     3     4     0     29   401   403   409   410     0     0     0     0     0
 54)  23    4    6     6     8     0     24   405   407     0     0     0     0     0     0     0
0                                          LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  CAP.
 55)  28   401    777   3400    910      0   301   652    35   306   115    30   307   132    30     0
 56)  28   402    777   1600     67      0   301    51    35     0     0     0     0     0     0     5
 57)  28   403    400   3400    804      0     0     0    35     0     0     0     0     0     0     0
 58)  28   404    400   1600    109      0     0     0    35     0     0     0     0     0     0     5
 59)  28   405      0   1760     86      0     0     0     0     0     0     0     0     0     0     0
 60)  28   407    675   1840    312      0   807   160    30   802   127    30     0     0     0     0
 61)  28   409    777      0     15      0   309    15  3030     0     0     0     0     0     0     0
 62)  28   410      0      0     25      0     0     0     0     0     0     0     0     0     0     0
0
INTERSECTION    5
0                                          CONTROLLER TIMING DATA
CARD   CARD   NODE  OFFSET/                INTERVAL DURATIONS (SECS, OR PERCENT)                                  DOUBL
NO.    TYPE   NO.  YLD.PT.  REF INT  INT1   INT2   INT3   INT4   INT5   INT6   INT7   INT8   INT9   INT10  INT11  CYCL
 63)  12    5     49     1     14     20     7     49    23     7     0     0     0     0     0     0
0                                          PHASE TIMING DATA
CARD   CARD   NODE  START  VARIAB. YELLOW ALL-RED MINIM.                                                          CONT
NO.    TYPE   NO.  INTVL   INTVL  INTVL  INTVL  SECS.   LINKS MOVING IN THIS PHASE .....                        FLA
 64)  21    5    1     1     3     0     28   501   502   503   504     0     0     0     0     0
 65)  22    5    4     4     6     0     31   505   506   507   508     0     0     0     0     0
0                                          LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  NO.   VOL.  SPD/TT  CAP.
 66)  28   501      0   3400    167      0     0     0     0     0     0     0     0     0     0     0
 67)  28   502      0   1200     33      0     0     0     0     0     0     0     0     0     0     5
1RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:  1    2    3    4    5    6    7    8    9   10   11   12   13   14   15   16

0                                          LINK DATA (CONTINUED)
CARD   CARD   LINK ADD START ADD CLEAR                FOURTH INPUT LINK
```

```
NO.    TYPE    NO.  LOST-TIME UTILIZAT.                          NO.   VOL.  SPD/TT
 68)    29     502      4      0     0      0      0      0      0     0     0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 69)    28     503   766    3400    197      0     603    114    30      605    33    30      608    51    30       0
 70)    28     504   766    1200     52      0     603     40    30        0     0     0        0     0     0       5
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 71)    29     504      4      0     0      0      0      0      0     0     0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 72)    28     505   625    3400    447      0     101    160    30      105   214    30      104   110    30       0
 73)    28     506   625     750     49      0     105     44    30        0     0     0        0     0     0       5
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 74)    29     506      4      0     0      0      0      0      0     0     0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 75)    28     507   625    3400    433      0     907    322    30      903    40    30      903   100    30       0
 76)    28     508   625     750     29      0     907     25    30        0     0     0        0     0     0       5
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 77)    29     508      4      0     0      0      0      0      0     0     0
0INTERSECTION   6
0CARD  CARD   NODE  OFFSET/                  INTERVAL DURATIONS (SECS. OR PERCENT)  CONTROLLER TIMING DATA  .....  DOUBL
 NO.   TYPE    NO.  VLD.PT.  REF INT  INT1    INT2    INT3    INT4    INT5    INT6    INT7    INT8    INT9    INT10   INT11  CYCL
 78)    12      6      53       1      47      24       7      23      12       7       0       0       0       0       0      0
1RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
 FIELDS:  1       2       3       4       5       6       7       8       9      10      11      12      13      14      15     16
0CARD  CARD   NODE  START   VARIAB. YELLOW  ALL-RED  PHASE  TIMING  DATA  LINKS MOVING IN THIS PHASE .....                      CONT
 NO.   TYPE    NO.  INTVL   INTVL   INTVL   INTVL   MINIM. SECS.                                                                 FLA
 79)    21      6      1       1       3       0      22     601     602    603    604     0       0       0       0       0      0
 80)    22      6      4       4       6       0      20     605     606    607    608     0       0       0       0       0      0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 81)    28     601   766    3400    264      0     501     90    30      506    49    30      507    53    30       0
 82)    28     602   766    1000     24      0     501     10    30        0     0     0        0     0     0       5
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 83)    29     602      4      0     0      0      0      0      0     0     0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 84)    28     603   762    3400    240      0     703     82    30      705    59    30      708    61    30       0
 85)    28     604   762    1000     83      0     703     40    30        0     0     0        0     0     0       5
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 86)    29     604      4      0     0      0      0      0      0     0     0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 87)    28     605   630    3400    144      0     205     23    30      201    22    30      204    70    30       0
 88)    28     606   630    1150     23      0     205     10    30        0     0     0        0     0     0       5
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 89)    29     606      4      0     0      0      0      0      0     0     0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
 NO.   TYPE    NO.  LENGTH  FLOW    VOL.    VOL.    NO.    VOL.  SPD/TT   NO.   VOL.  SPD/TT   NO.   VOL.  SPD/TT   CAP.
 90)    28     607   620    3400    180      0    1007    138    30     1002    42    30     1003   102    30       0
 91)    28     608   620    1150     51      0    1007     48    30        0     0     0        0     0     0       5
1RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
 FIELDS:  1       2       3       4       5       6       7       8       9      10      11      12      13      14      15     16
0CARD  CARD   LINK  ADD START  ADD CLEAR                    LINK DATA (CONTINUED)
 NO.   TYPE    NO.  LOST-TIME  UTILIZAT.                    FOURTH INPUT LINK
                                                            NO.   VOL.  SPD/TT
 92)    29     608      4      0     0      0      0      0      0     0     0
0INTERSECTION   7
0CARD  CARD   NODE  OFFSET/                  INTERVAL DURATIONS (SECS. OR PERCENT)  CONTROLLER TIMING DATA  .....  DOUBL
 NO.   TYPE    NO.  VLD.PT.  REF INT  INT1    INT2    INT3    INT4    INT5    INT6    INT7    INT8    INT9    INT10   INT11  CYCL
 93)    14      7      44       1      30       4       2       7       4       2      29      4-      24      10       4      0
0CARD  CARD   NODE  START   VARIAB. YELLOW  ALL-RED  PHASE  TIMING  DATA  LINKS MOVING IN THIS PHASE .....                      CONT
 NO.   TYPE    NO.  INTVL   INTVL   INTVL   INTVL   MINIM. SECS.                                                                 FLA
 94)    21      7      1       1       2       3      11     707     708      0       0       0       0       0       0       0      0
 95)    22      7      4       4       5       6      11     706     707      0       0       0       0       0       0       0      0
 96)    23      7      7       7       8       0      10     705     706      0       0       0       0       0       0       0      0
 97)    24      7      9       9      11       0      19     701     702    703     704       0       0       0       0       0      0
0CARD  CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST  LINK DATA  INPUT LINK....   SECOND INPUT LINK....   THIRD INPUT LINK....   QUEUE
```

NO.	TYPE	NO.	LENGTH	FLOW	VOL.	VOL.	NO.	VOL.	SPD/TT	NO.	VOL.	SPD/TT	NO.	VOL.	SPD/TT	CAP.
98)	28	701	762	3400	232	0	601	166	30	606	23	30	607	43	30	0
99)	28	702	762	1275	59	0	601	43	30	607	16	30	0	0	0	5

0

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
100)	29	702	4	0	0	0	0	0	0

0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
101)	28	703	777	3400	54	0	805	34	30	808	12	30	0	0	0	0
102)	28	704	777	1000	30	0	805	19	30	0	0	0	0	0	0	5

0

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
103)	29	704	4	0	0	0	0	0	0

1RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
104)	28	705	650	3400	942	0	301	182	30	304	73	30	305	687	30	0
105)	28	706	650	1600	88	0	301	13	30	305	44	30	0	0	0	5
106)	28	707	650	3400	814	0	1102	42	30	1103	117	30	1107	637	30	0
107)	28	708	650	1600	81	0	1103	14	30	1107	67	30	0	0	0	5

0

INTERSECTION 8

0

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ VLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
108)	12	8	3	1	28	25	7	30	23	7	0	0	0	0	0	0

0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT FLA
109)	21	8	1	1	3	0	33	801	802	0	0	0	0	0	0
110)	22	8	4	4	4	0	31	805	807	807	0	0	0	0	0

0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
111)	28	801	777	1700	139	0	701	96	30	706	43	30	0	0	0	0
112)	28	802	777	1600	157	0	701	80	30	707	77	30	0	0	0	5
113)	28	805	675	3400	230	0	601	94	30	604	94	30	605	62	30	0
114)	28	807	575	1600	114	0	1201	34	30	1203	78	30	0	0	0	0
115)	28	808	575	650	14	0	1203	14	30	0	0	0	0	0	0	5

0

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
116)	29	808	4	0	0	0	0	0	0

0

INTERSECTION 9

0

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ VLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
117)	13	9	0	3	0	12	5	0	5	0	12	5	0	0	0	1

1RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT FLA
118)	21	9	1	1	3	0	20	901	902	903	904	0	0	0	0
119)	22	9	4	4	4	0	10	907	908	0	0	0	0	0	0
120)	23	9	6	6	8	0	18	905	906	0	0	0	0	0	0

0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
121)	28	901	0	3400	576	0	0	0	0	0	0	0	0	0	0	0
122)	28	902	0	660	40	0	0	0	0	0	0	0	0	0	0	5

0

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
123)	29	902	4	0	0	0	0	0	0

0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
124)	28	903	300	3400	566	0	9903	660	30	0	0	0	0	0	0	0
125)	28	904	300	660	286	0	9903	286	30	0	0	0	0	0	0	5

0

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
126)	29	904	4	0	0	0	0	0	0

0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
127)	28	905	625	3400	449	0	501	39	30	504	52	30	505	378	30	0
128)	28	906	625	1600	42	0	501	10	30	505	38	30	0	0	0	5
129)	28	907	0	3400	447	0	0	0	0	0	0	0	0	0	0	0
130)	28	908	0	1600	40	0	0	0	0	0	0	0	0	0	0	5

0

INTERSECTION 10

0

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ VLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
131)	14	10	37	1	22	4	14	18	4	2	28	4	20	8	4	0

1RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT FLA
132)	21	10	1	1	2	0	10	1001	1002	0	0	0	0	0	0
133)	22	10	3	3	5	0	19	1001	1003	0	0	0	0	0	0
134)	23	10	7	7	8	0	10	1003	1004	0	0	0	0	0	0
135)	24	10	9	9	11	0	17	1005	1006	1007	1008				

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
136)	28	1001	466	3400	537	0	9901	537	30	0	0	0	0	0	0	0
137)	28	1002	466	1600	34	0	9901	39	30	0	0	0	0	0	0	0
138)	28	1003	762	3400	662	0	1103	486	30	1105	99	30	1108	77	30	5
139)	28	1004	762	1600	51	0	1103	41	30	1105	10	30	0	0	0	0
140)	28	1005	620	3400	141	0	601	26	30	604	43	30	605	90	30	5
141)	28	1006	620	900	69	0	601	30	30	605	39	30	0	0	0	

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		FOURTH INPUT LINK NO.	VOL.	SPD/TT							
142)	29	1006	4	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
143)	28	1007	0	3400	349	0	0	0	0	0	0	0	0	0	0	5
144)	28	1008	0	1200	114	0	0	0	0	0	0	0	0	0	0	

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		FOURTH INPUT LINK NO.	VOL.	SPD/TT							
145)	29	1008	4	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 11

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA (SECS. OR PERCENT) INTERVAL INT1	INT2	DURATIONS INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
146)	12	11	104	1	26	22	8	4	26	22	8	4	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT FLA
147)	21	11	1	1	3	4	35	1105	1106	1107	1108	0	0	0	0	0

1RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
148)	22	11	5	5	7	8	35	1101	1102	1103	1104	0	0	0	0	0
149)	28	1101	762	3400	659	0	1001	500	30	1006	85	30	1007	74	30	0
150)	28	1102	762	600	73	0	1006	62	30	1007	11	30	0	0	0	5

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		FOURTH INPUT LINK NO.	VOL.	SPD/TT							
151)	29	1102	4	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
152)	28	1103	777	3400	799	0	1203	703	30	1205	96	30	0	0	0	0
153)	28	1104	777	510	26	0	1203	22	30	1205	10	30	0	0	0	5

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		FOURTH INPUT LINK NO.	VOL.	SPD/TT							
154)	29	1104	4	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
155)	28	1105	600	3400	623	0	701	61	30	704	23	30	705	539	30	0
156)	28	1106	600	650	62	0	701	10	30	705	55	30	0	0	0	5

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		FOURTH INPUT LINK NO.	VOL.	SPD/TT							
157)	29	1106	4	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
158)	28	1107	0	3400	721	0	0	0	0	0	0	0	0	0	0	5
159)	28	1108	0	575	77	0	0	0	0	0	0	0	0	0	0	

1RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		FOURTH INPUT LINK NO.	VOL.	SPD/TT							
160)	29	1108	4	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 12

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA (SECS. OR PERCENT) INTERVAL INT1	INT2	DURATIONS INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBL CYCL
161)	12	12	116	1	51	7	5	35	8	4	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT FLA
162)	21	12	1	1	3	0	17	1201	1202	1203	0	0	0	0	0	0
163)	22	12	4	4	6	0	17	1205	1206	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND INPUT LINK NO.	VOL.	SPD/TT	THIRD INPUT LINK NO.	VOL.	SPD/TT	QUEUE CAP.
164)	28	1201	777	3400	482	0	1101	392	30	1106	74	30	1107	16	30	0

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165)   28    1202    777    650    32     0    1101    31    30    1107    10    30    0    0    0    5
0                                    LINK DATA (CONTINUED)
CARD   CARD   LINK  ADD START ADD CLEAR          FOURTH INPUT LINK
NO.    TYPE   NO.  LOST-TIME UTILIZAT.            NO.  VOL.  SPD/TT

166)   29    1202     4      0      0     0     0     0     0     0     0     0     0     0     0     0
0                                    LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.  VOL.  SPD/TT  NO.  VOL.  SPD/TT  NO.  VOL.  SPD/TT  CAP.

167)   28    1203      0     3400    816     0     0     0     0     0     0     0     0     0     0     0
168)   28    1205    [illegible]  1700     83     0   805    83    30     0     0     0     0     0     0     0
169)   28    1206    575    1600    229     0   801   150    30   805    79    30     0     0     0     5
0
BOTTLENECK LINKS

0                                    LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.  VOL.  SPD/TT  NO.  VOL.  SPD/TT  NO.  VOL.  SPD/TT  CAP.

0                                    LINK DATA
CARD   CARD   LINK   LINK    SAT.   TOTAL  MID-BLK. FIRST INPUT LINK.... SECOND INPUT LINK.... THIRD INPUT LINK.... QUEUE
NO.    TYPE   NO.  LENGTH   FLOW    VOL.    VOL.   NO.  VOL.  SPD/TT  NO.  VOL.  SPD/TT  NO.  VOL.  SPD/TT  CAP.

170)  -28    9901    300    2500    584     0    901   450    30    906    46    30    907    80    30     0
171)  -28    9903    466    2500    852     0   1003   652    30   1005    86    30   1008   114    30     0
1RUN TITLE:  DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:  1      2      3      4      5      6      7      8      9     10     11     12     13     14     15     16

0                                          GRAPH  PLOT  CARDS
CARD   CARD   LINK   LINK   LINK   LINK   LINK   LINK   LINK   LINK  LINK   LINK   LINK   LINK   LINK   LINK
NO.    TYPE   NO.    NO.    NO.    NO.    NO.    NO.    NO.    NO.   NO.    NO.    NO.    NO.    NO.    NO.

172)   40    1003   1001   9903   9901   903    901     0      0     0      0      0      0      0      0      0
0CARD  CARD                                     RUN CARD
 NO.   TYPE

173)   52     0      0      0      0      0      0      0      0     0      0      0      0      0      0      0
0--- PROGRAM NOTE --- A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES.
0--- PROGRAM NOTE --- IF CARD TYPE 4 WAS INPUT, IT IS IGNORED.
0--- PROGRAM NOTE --- NO ERRORS DETECTED, TRANSYT-7F NOW BEGINS FINAL PROCESSING.
                      IF ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.
0+++ 161 +++ WARNING +
+                     TOTAL NON-MIDBLOCK FLOW ON LINK  602 IS  240% GREATER THAN
                      THE SUM OF UPSTREAM INPUT FLOWS.
0+++ 161 +++ WARNING +
+                     TOTAL NON-MIDBLOCK FLOW ON LINK  606 IS  230% GREATER THAN
                      THE SUM OF UPSTREAM INPUT FLOWS.
0+++ 161 +++ WARNING +
+                     TOTAL NON-MIDBLOCK FLOW ON LINK  704 IS  300% GREATER THAN
                      THE SUM OF UPSTREAM INPUT FLOWS.
0--- PROGRAM NOTE --- THERE ARE A TOTAL OF  12 NODES AND  96 LINKS (INCLUDING BOTTLENECKS, IF ANY) IN THIS RUN.
0--- PROGRAM NOTE --- THERE WERE A TOTAL OF   6 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.
                                                                                    120 SECOND CYCLE  60 STEPS
1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
0<PERFORMANCE WITH OPTIMAL SETTINGS>
0   NODE LINK   FLOW   SAT   DEGREE  TOTAL   TOTAL  ------- DELAY -------  AVERAGE  UNIFORM  MAX BACK  QUEUE   FUEL  PHASE  LINK
    NO   NO           FLOW  OF SAT  TRAVEL  TIME  UNIFORM RANDOM  TOTAL   DELAY   STOPS  OF QUEUE CAPACITY CONSUM LENGTH  NO
                (VEH/H)(VEH/H) (%)  (VEH-MI/H)(VEH-H/H)    (VEH-H/H)      (SEC/VEH) (VEH/H;%) (VEH/LK)(VEH/LK) (GAL/H) (SEC)

      1   101   800   3400S   37    60.65   4.02   2.25   0.05   2.30   10.4   353.1( 44%)   13        32    6.71    81   101
      1   102    66   1600    35     3.49   0.79   0.65   0.05   0.70   54.4    42.2( 92%)    1         5    1.00    12   102
      1   103   956   3400S   45   134.79   5.05   1.10   0.09   1.19    4.5   140.3( 15%)    5        61    7.07    81   103
      1   104   100   1600    75    14.48   2.75   1.81   0.53   2.34   84.2    99.9(100%)    3         5    3.03    12   104
      1   105   530   3400    69     0.0    6.54   6.15   0.39   6.54   44.4   467.6( 88%)   16     >  0    7.38    27   105
      1   106    48    950    26     0.0    0.56   0.54   0.02   0.56   42.3    39.3( 82%)    1         5    0.63    27   106
      1   107   334   3400    44    39.43   3.98   2.60   0.08   2.68   28.9   213.9( 64%)    7        50    4.79    27   107
      1   108    86    750    60    10.15   1.29   0.74   0.22   0.96   40.0    45.4( 53%)    2         5    1.37    27   108
      1   109    15   101L    37     0.0    0.04   0.04   0.00   0.04   10.4     6.6( 44%)  101      101L   0.07    81   109
      1  1108    25   103L    45     3.62   0.45   0.08   0.00   0.08   11.5     9.9( 39%)  103      103L   0.77    81  1108
0     1   :     2940   MAX =   75   266.61  25.48  15.96   1.44  17.40   21.3  1418.1( 48%)                      32.82 PI =   27.2

      2   201   808   3400S   43   116.98   6.11   2.61   0.08   2.69   12.0   292.3( 36%)   10        61    8.58    71   201
      2   202    51   1598    38     7.38   1.24   0.98   0.06   1.03   73.0    51.2(100%)    2         5    1.43    12   202
      2   203   892   3400S   48   128.59   5.27   1.41   0.11   1.52    6.1   146.8( 16%)    5        61    7.12    71   203
      2   204    70   1598    53    10.09   1.95   0.66   0.05   0.70   35.2    69.6( 99%)    2         5    2.14    12   204
      2   205    72    697    35     0.0    0.70   0.14   0.04   0.18   25.7    54.1( 75%)    2     >   0    0.82    37   205
      2   207   138    663    68    16.46   2.06   1.18   0.34   1.52   39.6    99.1( 72%)    3        25    2.35    37   207
      2  2098    15   201L    43     2.17   0.31   0.07   0.00   0.07   16.7     7.6( 51%)  201      201L   0.51    71  2098
      2  2108    25   203L    48     3.60   0.51   0.00   0.00   0.00    0.5     0.0(  0%)  203      203L   0.41    71  2108
0     2   :     2071   MAX =   68   285.28  17.77   8.41   0.79   9.20   16.0   720.7( 35%)                      23.36 PI =   14.2

      3   301   973   3400S   77   140.27  10.34   5.65   0.65   6.30   23.3   398.3( 41%)   13        61   12.93    45   301
      3   302   154   1600    89    22.20   5.07   2.96   1.48   4.44  103.8   153.4(100%)    5         5    5.27    17   302
      3   303   941   3400S   76   138.58  10.35   5.80   0.57   6.38   24.4   411.8( 44%)   15        61   13.04    45   303
      3   304    73   1600    42    10.75   1.69   1.31   0.08   1.39   68.5    72.3( 99%)    2         5    1.98    17   304
      3   305   884   3400    71     0.0    8.23   7.80   0.43   8.23   33.5   721.3( 81%)   25     >  0   10.02    46   305
      3   306   116   1600    86     0.0    2.86   1.70   1.15   2.86   89.4   109.4( 95%)    4         5    2.70    12   306
      3   307   658   3400    53    80.95   6.96   4.16   0.15   4.31   23.6   400.9( 61%)   13        52    8.74    46   307
      3   308    82   1600    62    10.09   1.84   1.27   0.24   1.51   66.4    74.7( 91%)    3         5    1.94    12   308
      3  3098    15   301L    77     2.16   0.19   0.10   0.01   0.11   27.5     6.6( 44%)  301      301L   0.76    45  3098
      3  3108    25   303L    76     3.68   0.70   0.25   0.02   0.30   42.5    21.4( 86%)  303      303L   1.23    45  3108
0     3   :     3922   MAX =   89   408.68  48.24  31.05   4.78  35.83   32.9  2370.0( 60%)                      58.62 PI =   52.3

      4   401   910   3400S   45   134.01   5.44   1.40   0.09   1.49    5.9   155.4( 17%)    5        62    7.38    74   401
      4   402    67   1600    36     9.87   1.62   1.29   0.05   1.34   72.1    66.1( 99%)    2         5    1.87    16   402
      4   403   804   3400S   41    60.95   4.50   2.72   0.07   2.78   12.5   390.1( 49%)   14        32    7.35    74   403
      4   404   109   1600    58     8.26   1.93   1.49   0.20   1.69   56.0   100.0( 92%)    3         5    2.32    16   404
                                                                                    120 SECOND CYCLE  60 STEPS
1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE
0   NODE LINK   FLOW   SAT   DEGREE  TOTAL   TOTAL  ------- DELAY -------  AVERAGE  UNIFORM  MAX BACK  QUEUE   FUEL  PHASE  LINK
    NO   NO           FLOW  OF SAT  TRAVEL  TIME  UNIFORM RANDOM  TOTAL   DELAY   STOPS  OF QUEUE CAPACITY CONSUM LENGTH  NO
                (VEH/H)(VEH/H) (%)  (VEH-MI/H)(VEH-H/H)    (VEH-H/H)      (SEC/VEH) (VEH/H;%) (VEH/LK)(VEH/LK) (GAL/H) (SEC)

      4   405    86   1760    21     0.0    0.88   0.87   0.01   0.88   36.8    66.1( 77%)    2     >   0    1.01    30   405
      4   407   312   1840    73    39.94   3.60   1.82   0.48   2.29   26.4   158.3( 51%)    5        27    4.21    30   407
      4  4098    15   401L    45     2.21   0.30   0.05   0.00   0.05   12.4     5.6( 37%)  401      401L   0.48    74  4098
      4   410    25   403L    41     0.0    0.09   0.08   0.00   0.09   12.5    12.1( 49%)  403      403L   0.13    74   410
0     4   :     2328   MAX =   73   255.24  18.36   9.71   0.91  10.62   16.4   953.7( 41%)                      24.75 PI =   17.2

      5   501   167   3400    16     0.0    1.44   1.44   0.01   1.44   31.1   119.7( 72%)    6     >   0    1.72    41   501
      5   502    33   1200    10     0.0    0.31   0.31   0.00   0.31   33.6    24.2( 73%)    1         5    0.36    41   502
      5   503   197   3400    19    26.52   2.45   1.50   0.01   1.52   27.7   130.3( 66%)    4        61    3.02    41   503
      5   504    52   1200    16     7.53   0.53   0.27   0.01   0.28   19.3    23.2( 45%)    1         5    0.64    41   504
      5   505   447   3400    21    52.77   2.17   0.42   0.01   0.43    3.5    59.2( 13%)    2        50    2.81    79   505
      5   506    49    750    11     5.78   0.19   0.00   0.00   0.00    0.3     0.0(  0%)    0         5    0.24    79   506
      5   507   433   3400    21    51.12   2.30   0.61   0.01   0.62    5.2    93.5( 22%)    3        50    3.08    79   507
      5   508    29    750     7     3.42   0.14   0.03   0.00   0.03    3.6     2.5(  9%)    0         5    0.18    79   508
0     5   :     1407   MAX =   21   149.15   9.53   4.57   0.06   4.64   11.9   452.6( 32%)                      12.04 PI =    7.8

      6   601   264   3400    12    38.22   1.64   0.38   0.00   0.39    5.3    75.5( 29%)    3        61    2.28    80   601
```

	6	602	24	1000	4	3.47	0.14	0.03	0.00	0.03	3.8	2.3(9%)	0	5	0.17	80	602
	6	603	240	3400	11	34.60	1.34	0.20	0.00	0.20	3.0	39.6(16%)	1	61	1.79	80	603
	6	604	83	1000	14	11.97	0.55	0.15	0.01	0.16	6.8	26.5(32%)	1	5	0.75	80	604
	6	605	144	3400	14	17.18	2.68	2.12	0.01	2.12	53.0	115.8(80%)	4	50	2.91	40	605
	6	606	23	1150	7	2.74	0.13	0.04	0.00	0.04	5.8	1.6(7%)	0	5	0.24	40	606
	6	607	180	3400	17	21.14	2.02	1.32	0.01	1.33	26.6	95.6(53%)	3	50	2.38	40	607
	6	608	51	1150	16	5.99	0.38	0.18	0.01	0.19	12.9	8.1(16%)	0	5	0.43	40	608
0	6	:	1009	MAX =	17	135.31	8.89	4.41	0.04	4.45	15.9	364.9(36%)			10.96 PI =		7.0
	7	701	232	3400	43	33.44	3.43	2.25	0.08	2.33	36.2	165.2(71%)	6	61	4.02	21	701
	7	702	39	1275	37	8.51	0.95	0.62	0.05	0.67	40.9	43.3(73%)	2	5	1.09	21	702
	7	703	54	3400	10	7.95	0.66	0.40	0.00	0.40	26.6	43.2(80%)	1	62	0.86	21	703
	7	704	30	1000	24	4.42	0.39	0.22	0.02	0.24	29.0	22.3(74%)	1	5	0.48	21	704
	7	705	948	3400	43	115.90	4.91	1.03	0.08	1.11	4.2	169.2(18%)	6	52	6.51	80	705
	7	706	58	1600	48	7.14	1.00	0.65	0.11	0.77	47.5	56.9(98%)	2	5	1.18	13	706
	7	707	816	3400	34	100.39	4.16	0.82	0.04	0.86	3.8	173.7(21%)	6	52	5.72	86	707
	7	708	81	1600	40	9.21	1.71	1.34	0.07	1.41	62.7	76.9(95%)	3	5	1.65	21	708
0	7	:	2272	MAX =	48	286.96	17.21	7.32	0.46	7.79	12.3	750.9(33%)			21.70 PI =		13.0
	8	801	139	1700	18	20.47	0.68	0.00	0.01	0.01	0.3	0.1(0%)	0	31	0.85	61	801
	8	802	157	1600	21	23.12	1.28	0.01	0.01	0.02	12.0	54.6(35%)	2	5	1.64	61	802

1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE — 120 SECOND CYCLE 60 STEPS

O	NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM	DELAY RANDOM (VEH-H/H)	TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
	8	805	230	3400	15	29.44	1.97	0.99	0.01	1.00	15.7	94.5(41%)	3		54	2.47	59	805
	8	807	114	1600	16	12.40	1.68	1.27	0.01	1.27	40.2	103.5(91%)	3		23	2.03	59	807
	8	808	14	650	5	1.52	0.23	0.18	0.00	0.18	45.7	13.3(95%)	0		5	0.32	59	808
0	8	:	654	MAX =	21	86.95	5.84	2.95	0.04	2.99	16.4	266.0(41%)				7.30 PI =		4.8
	9	901	576	3400	39	0.0	1.92	1.86	0.06	1.92	12.0	362.6(63%)	6	>	0	3.41	29D	901
	9	902	40	660	17	0.0	0.15	0.14	0.01	0.15	13.6	25.3(63%)	0		5	0.25	29D	902
	9	903	566	3400	38	32.00	2.11	0.99	0.06	1.05	6.7	210.1(37%)	4		24	3.28	29D	903
	9	904	286	660	118*	16.17	2.93	2.74	23.27	26.21	329.9	242.0(85%)	17	>	51	21.23	29D	904
	9	905	469	3400	49	55.37	4.17	2.24	0.12	2.36	18.1	359.0(77%)	8		50	6.03	18D	905
	9	906	42	1600	9	4.96	0.35	0.19	0.00	0.19	16.2	28.2(67%)	1		5	0.50	18D	906
	9	907	467	3400	82	0.0	3.95	3.01	0.94	3.95	30.4	418.9(90%)	7	>	0	5.21	130	907
	9	908	40	1600	15	0.0	0.23	0.01	0.23	0.23	20.9	32.1(80%)	1		5	0.35	130	908
0	9	:	2486	MAX =	118*	108.51	39.63	11.59	24.47	36.06	52.2	1678.2(68%)				40.26 PI =		47.7
	10	1001	537	3400	27	47.38	2.79	1.21	0.02	1.24	8.3	217.8(41%)	8		37	4.08	75	1001
	10	1002	34	1600	18	3.00	0.49	0.38	0.01	0.39	41.6	26.3(77%)	1		5	0.66	16	1002
	10	1003	662	3400	32	95.43	3.74	0.56	0.04	0.60	3.3	82.4(12%)	3		61	4.81	74	1003
	10	1004	51	1600	26	7.35	0.80	0.54	0.02	0.56	39.7	47.6(93%)	2		5	0.98	15	1004
	10	1005	141	3400	18	16.56	1.45	0.90	0.01	0.91	23.2	64.3(46%)	2		50	1.71	30	1005
	10	1006	69	900	38	8.10	0.75	0.46	0.06	0.52	27.0	39.0(57%)	2		5	0.93	30	1006
	10	1007	349	3400	44	0.0	3.81	3.73	0.09	3.81	39.3	285.5(82%)	10	>	0	4.37	30	1007
	10	1008	114	1200	48	0.0	1.42	1.32	0.11	1.42	44.9	97.0(85%)	3		5	1.58	30	1008
0	10	:	1957	MAX =	48	177.83	15.30	9.10	0.36	9.46	17.4	859.9(44%)				19.12 PI =		15.4
	11	1101	659	3400	57	95.00	7.13	3.83	0.19	4.01	21.9	364.2(55%)	12		61	8.89	49	1101
	11	1102	73	600	39	10.52	0.74	0.33	0.06	0.39	19.4	71.4(98%)	2		5	1.12	49	1102
	11	1103	799	3400	69	117.66	8.75	4.51	0.38	4.89	22.0	321.8(40%)	12		62	10.22	49	1103
	11	1104	26	510	17	3.83	0.29	0.16	0.01	0.16	22.8	12.7(49%)	0		5	0.35	71	1104
	11	1105	623	3400	37	70.84	5.33	2.95	0.06	3.00	17.4	241.8(39%)	8		48	6.47	71	1105
	11	1106	62	650	21	7.05	0.56	0.32	0.01	0.33	19.2	25.2(41%)	1		5	0.67	71	1106
	11	1107	721	3400	43	0.0	4.02	3.94	0.08	4.02	20.1	443.7(62%)	15	>	0	5.40	71	1107
	11	1108	77	575	29	0.0	0.46	0.43	0.03	0.46	21.7	46.2(60%)	2		5	0.60	71	1108
0	11	:	3040	MAX =	69	304.91	27.29	16.46	0.82	17.28	20.5	1527.2(50%)				33.72 PI =		27.9
	12	1201	482	3400	27	70.98	3.05	0.70	0.02	0.72	5.4	75.8(16%)	3		62	3.86	66	1201
	12	1202	32	650	10	4.71	0.22	0.07	0.00	0.07	7.9	7.0(22%)	0		5	0.28	66	1202
	12	1203	816	3400	45	0.0	3.85	3.76	0.09	3.85	17.0	466.7(57%)	16	>	0	5.40	66	1203

1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE — 120 SECOND CYCLE 60 STEPS

O	NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM	DELAY RANDOM (VEH-H/H)	TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
	12	1205	83	1700	11	9.03	0.69	0.39	0.00	0.39	16.9	30.0(36%)	1		23	0.82	54	1205
	12	1206	229	1600	32	24.90	2.25	1.39	0.04	1.43	22.5	176.6(77%)	6	>	51	3.07	54	1206
0	12	:	1642	MAX =	45	109.62	10.06	6.30	0.16	6.46	14.2	756.0(46%)				13.44 PI =		11.7
	BN	9901	584	2500	23	33.02	1.08	0.0	0.0	0.0	0.0	0.0(0%)	0		12	1.35	NO CTL	9901
	BN	9903	852	2500	34	75.18	2.47	0.0	0.0	0.0	0.0	0.0(0%)	0		19	3.07	NO CTL	9903
0	B-NECKS:		1436	MAX =	34	108.20	3.55	0.0	0.0	0.0	0.0	0.0(0%)				4.42 PI =		0.0

<SYSTEM WIDE TOTALS INCLUDING ALL LINKS>

O	TOTAL DISTANCE TRAVELED (VEH-MI/H)	TOTAL TRAVEL TIME (VEH-H/H)	TOTAL UNIFORM DELAY (VEH-H/H)	TOTAL RANDOM DELAY (VEH-H/H)	TOTAL DELAY (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	TOTAL UNIFORM STOPS (VEH/H-%)	TOTAL FUEL CONSUM (GAL/H)	PERFORMANCE INDEX	SPEED (MI/H)	
	2683.23	247.15	127.83	34.32	162.15	21.49	12118.3(45%)	302.53	246.30	13.05	<TOTALS>
	17.45	2.08	0.58	0.03	0.61	18.45	51.1(43%)	4.17	0.97	8.40	<BUSES>
	2665.78	245.07	127.25	34.28	161.53	21.50	12067.2(45%)	298.36	245.34	13.09	<OTHER>

120 SECOND CYCLE 60 STEPS

1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

TRANSYT-7F SIGNAL CONTROLLER SETTINGS

NETWORK-WIDE SIGNAL TIMING DATA

OSYSTEM CYCLE LENGTH = 120 SECONDS
OMASTER OFFSET REFERENCE LOCATION = INTERSECTION NO. 2
OALL OFFSETS ARE REFERENCED TO THE START OF INTERVAL NO. 1 AT THIS SIGNAL.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1

OINTERVAL NUMBER :	1	2	3	4	5	6
OINTVL LENGTH(SEC):	8	4	77	4	23	4
OINTVL LENGTH (%):	7	3	65	3	19	3
OPIN SETTINGS (%):	100/0	7	10	75	78	97
OPHASE START (PHF):	1		2		3	

```
0INTERVAL   TYPE :      V   Y   V   Y   V   Y
0LINKS  MOVING :    102     101     105
                    104     103     106
                            109     107
                            110     108

00FFSET = 118 SEC.  98 %.
1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE            120 SECOND CYCLE  60 STEPS


 INTERSECTION     2

0INTERVAL  NUMBER :     1   2   3   4   5   6   7
0INTVL LENGTH(SEC):     8   4  67   4   8  25   4
0INTVL LENGTH  (%):     7   3  56   3   7  21   3
0PIN SETTINGS  (%): 100/0   7  10  66  69  76  97
0PHASE START (PH#):     1       2       3
0INTERVAL   TYPE :      V   Y   V   Y   F   V   Y
0LINKS  MOVING :    202     201     205
                    204     203     207
                            209
                            210

00FFSET =   0 SEC.   0 %.
0THIS IS THE MASTER CONTROLLER.
0+++ 193 +++ WARNING +
+                   THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO.  1.


 INTERSECTION     3

0INTERVAL  NUMBER :     1   2   3   4   5   6   7   8
0INTVL LENGTH(SEC):    13   4  41   4   8   4  42   4
0INTVL LENGTH  (%):    11   3  34   3   7   3  36   3
0PIN SETTINGS  (%): 100/0  11  14  48  51  58  61  97
0PHASE START (PH#):     1       2       3       4
0INTERVAL   TYPE :      V   Y   V   Y   V   Y   V   Y
0LINKS  MOVING :    302     301     306     305
                    304     303     308     307
                            309
                            310

00FFSET = 114 SEC.  95 %.
1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE            120 SECOND CYCLE  60 STEPS


 INTERSECTION     4

0INTERVAL  NUMBER :     1   2   3   4   5   6   7   8
0INTVL LENGTH(SEC):    12   4  46  24   4  14  12   4
0INTVL LENGTH  (%):    10   3  39  20   3  12  10   3
0PIN SETTINGS  (%): 100/0  10  13  52  72  75  87  97
0PHASE START (PH#):     1       2       3
0INTERVAL   TYPE :      V   Y   V   F   Y   V   F   Y
0LINKS  MOVING :    402     401         405
                    404     403         407
                            409

                            410
00FFSET = 114 SEC.  95 %.


 INTERSECTION     5

0INTERVAL  NUMBER :     1   2   3   4   5   6
0INTVL LENGTH(SEC):    14  20   7  49  23   7
0INTVL LENGTH  (%):    12  17   6  40  19   6
0PIN SETTINGS  (%): 100/0  12  29  35  75  94
0PHASE START (PH#):     1       2
0INTERVAL   TYPE :      V   F   Y   V   F   Y
0LINKS  MOVING :    501         505
                    502         506
                    503         507
                    504         508
00FFSET =  45 SEC.  38 %.
1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE            120 SECOND CYCLE  60 STEPS


 INTERSECTION     6

0INTERVAL  NUMBER :     1   2   3   4   5   6
0INTVL LENGTH(SEC):    49  24   7  21  12   7
0INTVL LENGTH  (%):    40  20   6  18  10   6
0PIN SETTINGS  (%): 100/0  40  60  66  84  94
0PHASE START (PH#):     1       2
0INTERVAL   TYPE :      V   F   Y   V   F   Y
0LINKS  MOVING :    601         605
                    602         606
                    603         607
                    604         608
00FFSET =  11 SEC.   9 %.


 INTERSECTION     7

0INTERVAL  NUMBER :     1   2   3   4   5   6   7   8   9  10  11
0INTVL LENGTH(SEC):    15   4   2  61   4   2   9   4   5  10   4
0INTVL LENGTH  (%):    13   3   2  51   3   2   8   3   4   8   3
0PIN SETTINGS  (%): 100/0  13  16  18  69  72  74  82  85  89  97
0PHASE START (PH#):     1       2       3       4       5
0INTERVAL   TYPE :      V   Y   R   V   Y   R   V   Y   V   F   Y
0LINKS  MOVING :    707         705         705     701
                    708         707         706     702
                                            703
                                            704

00FFSET =  38 SEC.  32 %.
0+++ 193 +++ WARNING +
+                   THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO.  5.
1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE            120 SECOND CYCLE  60 STEPS
```

```
 INTERSECTION     8
 OINTERVAL  NUMBER :     1     2     3     4     5     6
 OINTVL LENGTH(SEC):    29    25     7    29    23     7
 OINTVL LENGTH  (%):    24    21     6    24    19     6
 OPIN SETTINGS  (%): 100/0    24    45    51    75    94
 OPHASE START (PH#):     1                 2
 OINTERVAL   TYPE  :     V     F     Y     V     F     Y
 OLINKS  MOVING    :   801                 805
                       802                 807
                                           808

 OOFFSET =  21 SEC.   18 %.


 INTERSECTION     9
 OINTERVAL  NUMBER :     1     2     3     4     5     6     7     8     1     2     3     4     5     6     7     8
 OINTVL LENGTH(SEC):    12    12     5     8     5     1    12     5    12    12     5     8     5     1    12     5
 OINTVL LENGTH  (%):    10    10     4     7     4     1    10     4    10    10     4     7     4     1    10     4
 OPIN SETTINGS  (%): 100/0    10    20    24    31    35    36    46    50    60    70    74    81    85    86    96
 OPHASE START (PH#):     1                 2                 3                 1                 2                 3
 OINTERVAL   TYPE  :     V     F     Y     V     Y     V     F     Y     V     F     Y     V     Y     V     F     Y
 OLINKS  MOVING    :   901                 907                 905
                       902                 908                 906
                       903
                       904

 OYIELD POINT =  71 SEC.   59 %; REFERENCED TO START  OF INTERVAL NO.   3
 1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE                120 SECOND CYCLE  60 STEPS


 INTERSECTION    10
 OINTERVAL  NUMBER :     1     2     3     4     5     6     7     8     9    10    11
 OINTVL LENGTH(SEC):    12     4    43    10     4     2    11     4    18     8     4
 OINTVL LENGTH  (%):    10     3    37     8     3     2     9     3    15     7     3
 OPIN SETTINGS  (%): 100/0    10    13    50    58    61    63    72    75    90    97
 OPHASE START (PH#):     1           2                       3           4
 OINTERVAL   TYPE  :     V     Y     V     F     Y     F     V     Y     V     F     Y
 OLINKS  MOVING    :  1001          1001                 1003          1005
                      1002          1003                 1004          1006
                                                                       1007
                                                                       1008

 OOFFSET =   6 SEC.   5 %.


 INTERSECTION    11
 OINTERVAL  NUMBER :     1     2     3     4     5     6     7     8
 OINTVL LENGTH(SEC):    37    22     8     4    15    22     8     4
 OINTVL LENGTH  (%):    31    18     7     3    13    18     7     3
 OPIN SETTINGS  (%): 100/0    31    49    56    59    72    90    97
 OPHASE START (PH#):     1                       2
 OINTERVAL   TYPE  :     V     F     Y     R     V     F     Y     R

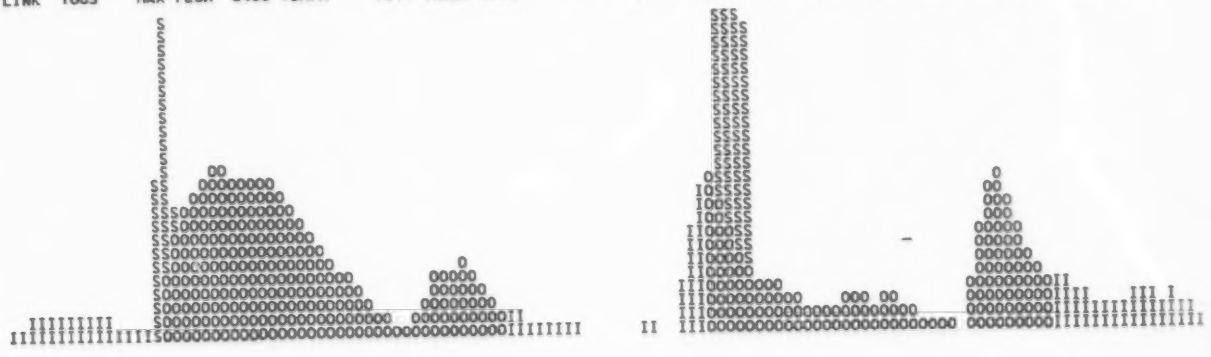


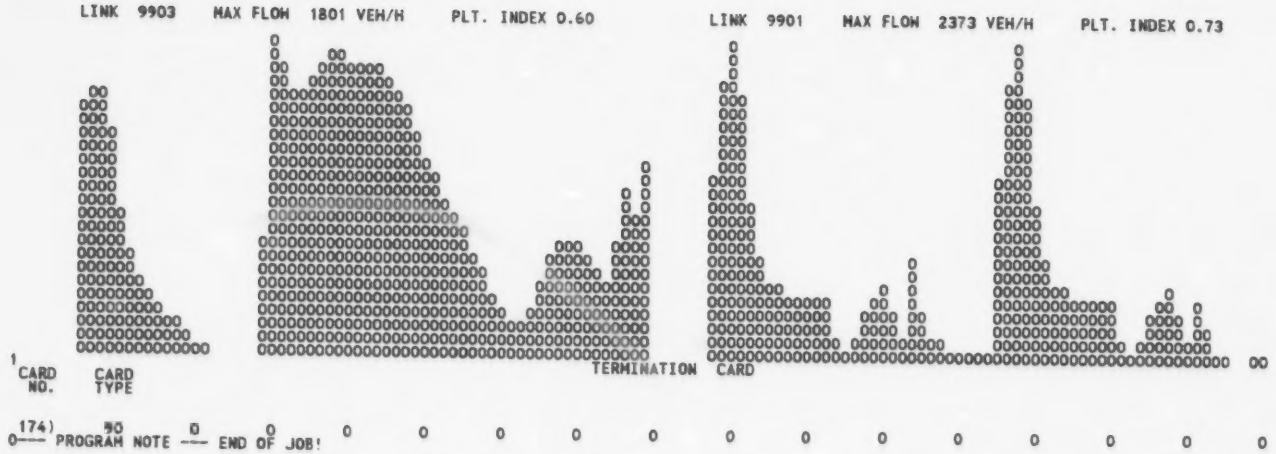
 OLINKS  MOVING    :  1105                 1101
                      1106                 1102
                      1107                 1103
                      1108                 1104

 OOFFSET =  60 SEC.   50 %.
 0+++ 193 +++ WARNING +
 +                    THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO.  3.
 0+++ 189 +++ WARNING +
 +                    THE OFFSET FALLS WITHIN A CLEARANCE INTERVAL. (INTERVAL  3,  PHASE  1)
 1DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE                120 SECOND CYCLE  60 STEPS


 INTERSECTION    12
 OINTERVAL  NUMBER :     1     2     3     4     5     6
 OINTVL LENGTH(SEC):    55     7     5    41     8     4
 OINTVL LENGTH  (%):    46     6     4    34     7     3
 OPIN SETTINGS  (%): 100/0    46    52    56    90    97
 OPHASE START (PH#):     1                 2
 OINTERVAL   TYPE  :     V     F     Y     V     F     Y
 OLINKS  MOVING    :  1201                 1205
                      1202                 1206
                      1203

 OOFFSET =   2 SEC.   2 %.
 0+++ 193 +++ WARNING +
 +                    THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO.  6.
 0+++ 189 +++ WARNING +
 +                    THE OFFSET FALLS WITHIN A CLEARANCE INTERVAL. (INTERVAL  6,  PHASE  2)
 1       LINK  1003    MAX FLOW  3400 VEH/H     PLT. INDEX 0.72              LINK  1001    MAX FLOW  3400 VEH/H     PLT. INDEX 0.61
```





1
CARD NO. CARD TYPE

174) 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0—— PROGRAM NOTE —— END OF JOB!

Appendix E

```
SEGLDR     Version 5.0     (Chg=05/15/88)                Job TRANS          02/16/90  12:04:18          Page 1

*Caution* Duplicate entry 'DATE' discovered:
    Entry in module 'DATE' from file '$BLD' is used
    Entry in module 'SDATE' from file '$UTLIB' is ignored
*Caution* Length of common block 'MEM' redefined larger by module
    'MODUL' from file '$BLD'
```

TRANSYT-7F — TRAFFIC SIGNAL SYSTEM OPTIMIZATION PROGRAM

RELEASE 3 FEB,1983 VERSION 2.1

SPONSORED BY:
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC OPERATIONS

DEVELOPED BY:
TRANSPORT AND ROAD RESEARCH LABORATORY
UNITED KINGDOM AND
TRANSPORTATION RESEARCH CENTER
UNIVERSITY OF FLORIDA

INPUT DATA REPORT FOR RUN 1

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
							NETWORK CONTROL CARD									
CARD NO.	CARD TYPE	MIN CYCLE	MAX CYCLE	CYCLE INCR.	SEC/ STEP CYCLE	SEC/ STEP NORMAL	LOST TIME	GREEN EXTEN.	STOP PENALTY	OUTPUT LEVEL	INITIAL TIMINGS	PERIOD LENGTH	SEC(0) PERC(1)	SPD(0) TIME(1)	ENGL(0) METR(1)	PUNCH DECK(1)
1)	1	120	120	0	0	0	2	4	25	1	1	60	0	0	0	0

+++ 106 +++ WARNING - THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE 60 SECONDS.
IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS PER CYCLE.

+++ 110 +++ WARNING - INITIAL TIMINGS HAVE BEEN REQUESTED IN FIELD 11.
TRANSYT-7F WILL IGNORE ANY OFFSET AND VARIABLE INTERVAL VALUES
CODED ON CARD TYPES 18 AND 18.
AN OPTIMIZATION RUN IS EXPECTED.

CARD NO.	CARD TYPE	LIST OF NODES TO BE OPTIMIZED														
2)	2	1	2	3	4	5	6	7	8	9	10	11	12	0	0	0

CARD NO.	CARD TYPE	FIRST SET.....				LINKS HAVING SECOND SET.....		SHARED STOPLINES				THIRD SET.....				
3)	7	101	109	0	0	0	103	110	0	0	0	201	209	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4)	7	203	210	0	0	0	301	309	0	0	0	303	310	0	0	0
5)	7	401	409	0	0	0	403	410	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	MASTER MODE	DEF. YELLOW	CLEARANCES ALL-RED	SYSTEM SATFLOW	EXTERNAL SPEED	SYSTEM POF	MASTER FUEL FACTOR	DATA VEHICLE LENGTH						
6)	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- INPUT UNITS WERE SPECIFIED AS FOLLOWS:

- SPEED/TRAVEL TIME IN SPEED
- ENGLISH/METRIC UNITS IN ENGLISH
- TIMING UNITS IN SECONDS

INTERSECTION 1

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA (SECS OR PERCENT) INTERVAL DURATIONS INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
7)	13	1	4	1	18	4	52	4	28	4	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
8)	21	1	1	1	2	0	10	102	104	0	0	0	0	0	0
9)	22	1	3	3	1	0	20	101	103	109	110	0	0	0	0
10)	23	1	5	8	4	0	24	105	106	107	108	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK NO.	VOL.	SPD/TT	SECOND NO.	INPUT LINK VOL.	SPD/TT	THIRD NO.	INPUT LINK VOL.	SPD/TT	QUEUE CAP.
11)	28	101	400	3400	800	0	0	0	35	0	0	0	0	0	0	0
12)	28	102	400	1600	46	0	0	0	35	0	0	0	0	0	0	0
13)	28	103	744	3400	956	50	203	711	35	209	24	30	207	40	30	0
14)	28	104	744	1600	100	0	203	91	35	0	0	0	0	0	0	0
15)	28	105	0	3400	530	0	0	0	0	0	0	0	0	0	0	0
16)	28	106	0	950	48	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START UTILIZAT.	ADD CLEAR		LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT						
17)	29	106	4	0	0	0	0	0	0	0	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	LINK DATA INPUT VOL.	LINK DATA LINK SPD/TT	SECOND NO.	SECOND INPUT VOL.	SECOND LINK SPD/TT	THIRD NO.	THIRD INPUT VOL.	THIRD LINK SPD/TT	QUEUE CAP.
18)	28	107	625	3400	334	0	502	33	30	503	49	30	507	212	30	0
19)	28	108	625	790	86	0	507	76	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	FOURTH INPUT VOL.	FOURTH LINK SPD/TT							
20)	29	108	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	LINK DATA INPUT VOL.	LINK DATA LINK SPD/TT	SECOND NO.	SECOND INPUT VOL.	SECOND LINK SPD/TT	THIRD NO.	THIRD INPUT VOL.	THIRD LINK SPD/TT	QUEUE CAP.
21)	28	109	0	0	15	0	0	0	0	0	0	0	0	0	0	0
22)	28	110	764	0	25	0	210	25	3025	0	0	0	0	0	0	0

INTERSECTION 2

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
23)	13	2	0	1	8	4	80	4	8	12	4	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SETS.	TIMING DATA LINKS MOVING IN THIS PHASE						CONT. FLAG
24)	21	2	1	1	2	0	10	202	204	0	0	0	0	0	0	0
25)	22	2	3	3	4	0	20	201	203	209	210	0	0	0	0	0
26)	23	2	5	6	7	0	24	205	207	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	LINK DATA INPUT VOL.	LINK DATA LINK SPD/TT	SECOND NO.	SECOND INPUT VOL.	SECOND LINK SPD/TT	THIRD NO.	THIRD INPUT VOL.	THIRD LINK SPD/TT	QUEUE CAP.
27)	28	201	766	200	808	0	106	44	30	107	104	30	101	586	35	0
28)	28	202	766	94	51	0	101	28	35	0	0	0	0	0	0	0
29)	28	203	762	200	892	0	303	873	35	305	153	30	308	82	30	0
30)	28	204	762	94	70	0	303	42	35	0	0	0	0	0	0	5
31)	28	205	0	41	72	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	FOURTH INPUT VOL.	FOURTH LINK SPD/TT							
32)	29	205	2	0	0	0	0	0	0	0	0	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	LINK DATA INPUT VOL.	LINK DATA LINK SPD/TT	SECOND NO.	SECOND INPUT VOL.	SECOND LINK SPD/TT	THIRD NO.	THIRD INPUT VOL.	THIRD LINK SPD/TT	QUEUE CAP.
33)	28	207	630	39	138	0	607	65	30	603	49	30	602	24	30	0
34)	28	209	764	0	12	0	109	12	3030	0	0	0	0	0	0	0
35)	28	210	762	0	25	0	310	25	3008	0	0	0	0	0	0	0

INTERSECTION 3

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
36)	14	3	102	1	12	4	41	4	12	4	39	4	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE						CONT. FLAG
37)	21	3	1	1	2	0	10	302	304	0	0	0	0	0	0	0
38)	22	3	3	3	4	0	20	301	303	309	310	0	0	0	0	0
39)	23	3	5	6	7	0	10	306	308	0	0	0	0	0	0	0
40)	24	3	7	7	8	0	24	305	307	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	LINK DATA INPUT VOL.	LINK DATA LINK SPD/TT	SECOND NO.	SECOND INPUT VOL.	SECOND LINK SPD/TT	THIRD NO.	THIRD INPUT VOL.	THIRD LINK SPD/TT	QUEUE CAP.
41)	28	301	762	3400	973	0	201	533	30	205	14	30	207	64	30	0
42)	28	302	762	1600	154	0	201	119	35	0	0	0	0	0	0	5
43)	28	303	777	3400	941	0	403	547	30	405	10	30	407	46	30	0
44)	28	304	777	1600	173	0	403	40	35	0	0	0	0	0	0	5
45)	28	305	0	3400	884	0	0	0	0	0	0	0	0	0	0	0
46)	28	306	0	1600	115	0	0	0	0	0	0	0	0	0	0	5
47)	28	307	650	3400	668	0	307	341	30	702	43	30	703	40	30	0
48)	28	308	650	1600	113	0	307	79	35	0	0	0	0	0	0	5
49)	28	309	777	0	12	0	309	12	3000	0	0	0	0	0	0	0
50)	28	310	777	0	25	0	410	25	3038	0	0	0	0	0	0	0

INTERSECTION 4

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
51)	13	4	82	1	8	4	56	24	4	8	12	4	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
52)	21	4	1	1	2	0	10	402	404	0	0	0	0	0	0	0
53)	22	4	3	3	5	0	29	401	403	409	410	0	0	0	0	0
54)	23	4	6	6	8	0	24	405	407	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
55)	28	401	777	3400	910	0	301	652	35	306	115	30	307	132	30	0
56)	28	402	777	1600	67	0	301	51	35	0	0	0	0	0	0	5
57)	28	403	400	3400	804	0	0	0	35	0	0	0	0	0	0	0
58)	28	404	400	1600	109	0	0	0	35	0	0	0	0	0	0	5
59)	28	406	0	1760	86	0	0	0	0	0	0	0	0	0	0	0
60)	28	407	675	1840	312	0	807	160	30	802	127	30	0	0	0	0
61)	28	409	777	0	15	0	309	15	3030	0	0	0	0	0	0	0
62)	28	410	0	0	25	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 5

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
63)	12	5	49	1	14	20	7	49	23	7	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
64)	21	5	1	1	3	0	28	501	502	503	504	0	0	0	0	0
65)	22	5	4	4	6	0	31	505	506	507	508	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
66)	28	501	0	3400	167	0	0	0	0	0	0	0	0	0	0	0
67)	28	502	0	1200	33	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
68)	29	502	4	0	0	0	0	0	0	0	0	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
69)	28	503	766	3400	197	0	603	114	30	605	33	30	608	51	30	0
70)	28	504	766	1200	52	0	603	40	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
71)	29	504	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
72)	28	505	625	3400	447	0	101	160	30	105	214	30	104	110	30	0
73)	28	506	625	750	49	0	105	44	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
74)	29	506	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
75)	28	507	625	3400	433	0	907	322	30	902	40	30	903	100	30	0
76)	28	508	625	750	29	0	907	25	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
77)	29	508	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 6

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
78)	12	6	53	1	47	24	7	23	12	7	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
79)	21	6	1	1	3	0	32	601	602	603	604	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
80)	22	6	4	4	6	0	20	605	606	607	608	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
81)	28	601	766	3400	264	0	501	90	30	506	49	30	507	53	30	0
82)	28	602	766	1000	24	0	501	10	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	INPUT VOL.	LINK SPD/TT							
83)	29	602	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
84)	28	603	762	3400	240	0	703	83	30	705	59	30	708	61	30	0
85)	28	604	762	1000	83	0	703	40	30	705	40	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	INPUT VOL.	LINK SPD/TT							
86)	29	604	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
87)	28	605	630	3400	144	0	205	23	30	201	22	30	204	70	30	0
88)	28	606	630	1150	23	0	205	10	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	INPUT VOL.	LINK SPD/TT							
89)	29	606	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
90)	28	607	620	3400	180	0	1007	138	30	1002	42	30	1003	102	30	0
91)	28	608	620	1150	51	0	1007	48	30	0	0	0	0	0	0	5

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	INPUT VOL.	LINK SPD/TT							
92)	29	608	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 7

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
93)	14	7	44	1	30	4	2	7	4	2	29	4	24	10	4	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
94)	21	7	1	1	2	3	11	707	708	0	0	0	0	0	0	0
95)	22	7	4	4	5	6	11	706	707	0	0	0	0	0	0	0
96)	23	7	7	7	8	0	10	705	706	0	0	0	0	0	0	0
97)	24	7	9	9	11	0	19	701	702	703	704	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
98)	28	701	762	3400	232	0	601	166	30	606	23	30	607	43	30	0
99)	28	702	762	1275	59	0	601	43	30	607	16	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	INPUT VOL.	LINK SPD/TT							
100)	29	702	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST NO.	INPUT VOL.	LINK SPD/TT	SECOND NO.	INPUT VOL.	LINK SPD/TT	THIRD NO.	INPUT VOL.	LINK SPD/TT	QUEUE CAP.
101)	28	703	777	3400	64	0	805	24	30	808	12	30	0	0	0	0
102)	28	704	777	1000	30	0	805	10	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH NO.	INPUT VOL.	LINK SPD/TT							
103)	29	704	4	0	0	0	0	0	0	0	0	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
104)	28	705	650	3400	942	0	301	182	30	304	73	30	305	687	30	0
105)	28	706	650	1600	58	0	301	13	30	306	45	30	0	0	0	5
106)	28	707	650	3400	816	0	1102	62	30	1103	117	30	1107	637	30	0
107)	28	708	600	1600	81	0	1103	14	30	1107	67	30	0	0	0	5

INTERSECTION 8

CARD NO.	CARD TYPE	MODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) CONTROLLER TIMING DATA INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
108)	12	8	3	1	28	25	7	30	23	7	0	0	0	0	0	0

CARD NO.	CARD TYPE	MODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT. FLAG
109)	21	8	1	1	3	0	33	801	802	0	0	0	0	0	0
110)	22	8	4	4	6	0	31	805	807	808	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
111)	28	801	777	1700	139	0	701	96	30	706	43	30	0	0	0	0
112)	28	802	777	1600	157	0	701	80	30	707	77	30	0	0	0	5
113)	28	805	675	3400	230	0	401	94	30	404	95	30	405	62	30	0
114)	28	807	575	1600	114	0	1202	36	30	1203	78	30	0	0	0	0
115)	28	808	575	650	14	0	1203	14	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
116)	29	808	4	0	0	0	0

INTERSECTION 9

CARD NO.	CARD TYPE	MODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) CONTROLLER TIMING DATA INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
117)	13	9	0	3	0	12	5	0	5	0	12	5	0	0	0	1

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	MODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT. FLAG
118)	21	9	1	1	3	0	20	901	902	903	904	0	0	0	0
119)	22	9	4	4	5	0	10	907	908	0	0	0	0	0	0
120)	23	9	6	6	8	0	18	905	906	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
121)	28	901	0	3400	576	0	0	0	0	0	0	0	0	0	0	0
122)	28	902	0	660	40	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
123)	29	902	4	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
124)	28	903	300	3400	566	0	9903	560	30	0	0	0	0	0	0	0
125)	28	904	300	660	284	0	9903	284	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
126)	29	904	4	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK... NO.	VOL.	SPD/TT	SECOND INPUT LINK... NO.	VOL.	SPD/TT	THIRD INPUT LINK... NO.	VOL.	SPD/TT	QUEUE CAP.
127)	28	905	625	3400	469	0	501	39	30	504	52	30	505	378	30	0
128)	28	906	625	1600	42	0	501	10	30	505	38	30	0	0	0	5
129)	28	907	0	3400	467	0	0	0	0	0	0	0	0	0	0	0
130)	28	908	0	1600	40	0	0	0	0	0	0	0	0	0	0	5

INTERSECTION 10

CARD NO.	CARD TYPE	MODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) CONTROLLER TIMING DATA INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
131)	14	10	37	1	22	4	14	10	6	2	28	4	20	8	4	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
132)	21	10	1	1	2	0	10	1001	1002	0	0	0	0	0	0
133)	22	10	3	3	5	0	19	1001	1003	0	0	0	0	0	0
134)	23	10	7	7	8	0	10	1003	1004	0	0	0	0	0	0
135)	24	10	9	9	11	0	17	1005	1006	1007	1008	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
136)	28	1001	466	3400	537	0	9901	537	30	0	0	0	0	0	0	0
137)	28	1002	466	1600	34	0	9901	39	30	0	0	0	0	0	0	5
138)	28	1003	762	3400	662	0	1103	486	30	1105	99	30	1108	77	30	0
139)	28	1004	762	1600	51	0	1103	41	30	1105	10	30	0	0	0	5
140)	28	1005	620	3400	141	0	601	26	30	604	43	30	605	90	30	0
141)	28	1006	620	900	69	0	601	30	30	605	39	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
142)	29	1006	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
143)	28	1007	0	3400	349	0	0	0	0	0	0	0	0	0	0	0
144)	28	1008	0	1200	114	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
145)	29	1008	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 11

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
146)	12	11	104	1	26	22	8	4	26	22	8	4	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
147)	21	11	1	1	3	4	35	1105	1106	1107	1108	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

148)	22	11	5	5	7	8	35	1101	1102	1103	1104	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
149)	28	1101	762	3400	659	0	1001	500	30	1006	85	30	1007	74	30	0
150)	28	1102	762	600	73	0	1006	62	30	1007	11	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
151)	29	1102	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
152)	28	1103	777	3400	799	0	1203	703	30	1205	96	30	0	0	0	0
153)	28	1104	777	510	26	0	1203	22	30	1205	10	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
154)	29	1104	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
155)	28	1105	600	3400	623	0	701	61	30	704	73	30	705	539	30	0
156)	28	1106	600	650	62	0	701	10	30	705	55	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
157)	29	1106	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
158)	28	1107	0	3400	721	0	0	0	0	0	0	0	0	0	0	0
159)	28	1108	0	575	77	0	0	0	0	0	0	0	0	0	0	5

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT						
160)	29	1108	4	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 12

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
161)	12	12	116	1	61	7	5	35	8	4	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT. FLAG
162)	21	12	1	1	3	0	17	1201	1202	1203	0	0	0	0	0
163)	22	12	4	4	6	0	17	1205	1206	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
164)	28	1201	777	3400	482	0	1101	392	30	1106	74	30	1107	16	30	0
165)	28	1202	777	650	32	0	1101	31	30	1107	10	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT						
166)	29	1202	4	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
167)	28	1203	0	3400	816	0	0	0	0	0	0	0	0	0	0	0
168)	28	1205	575	1700	83	0	805	83	30	0	0	0	0	0	0	0
169)	28	1206	575	1600	229	0	801	150	30	805	79	30	0	0	0	5

BOTTLENECK LINKS

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
170)	-28	9901	300	2500	584	0	901	450	30	906	46	30	907	80	30	0
171)	-28	9903	466	2500	852	0	1003	652	30	1005	86	30	1008	114	30	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CARD NO.	CARD TYPE	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	GRAPH LINK NO.	PLOT LINK NO.	CARDS LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	
172)	40	1003	1001	9903	9901	903	901	0	0	0	0	0	0	0	0	0
CARD NO.	CARD TYPE						RUN	CARD								
173)	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES.
IF CARD TYPE 4 WAS INPUT, IT IS IGNORED.

--- PROGRAM NOTE --- NO ERRORS DETECTED. TRANSYT-7F NOW BEGINS FINAL PROCESSING.
IF ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

+++ 161 +++ WARNING + TOTAL NON-MIDBLOCK FLOW ON LINK 602 IS 240% GREATER THAN THE SUM OF UPSTREAM INPUT FLOWS.

+++ 161 +++ WARNING + TOTAL NON-MIDBLOCK FLOW ON LINK 606 IS 230% GREATER THAN THE SUM OF UPSTREAM INPUT FLOWS.

+++ 161 +++ WARNING + TOTAL NON-MIDBLOCK FLOW ON LINK 704 IS 300% GREATER THAN THE SUM OF UPSTREAM INPUT FLOWS.

--- PROGRAM NOTE --- THERE ARE A TOTAL OF 12 NODES AND 96 LINKS (INCLUDING BOTTLENECKS, IF ANY) IN THIS RUN.

--- PROGRAM NOTE --- THERE WERE A TOTAL OF 5 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE — 120 SECOND CYCLE 60 STEPS

<PERFORMANCE WITH OPTIMAL SETTINGS>

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H:%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
1	101	800	3400S	43	60.65	5.08	3.29	0.07	3.37	15.2	431.1(54%)	15		32	8.08	69	101
1	102	46	1600	35	3.49	0.81	0.66	0.05	0.71	55.6	42.2(92%)	1		5	1.02	12	102
1	103	956	3400S	52	134.79	4.75	0.76	0.13	0.89	3.4	97.5(10%)	3		61	6.52	69	103
1	104	100	1600	75	14.48	1.11	0.16	0.53	0.70	25.1	12.7(13%)	0		5	1.16	12	104
1	105	530	3400	51	0.00	5.13	5.00	0.13	5.13	34.9	419.8(79%)	14	>	0	6.08	39	105
1	106	48	950	18	0.00	0.45	0.44	0.01	0.45	33.9	35.3(73%)	1		5	0.53	39	106
1	107	334	3400	32	39.43	3.59	2.26	0.04	2.29	24.7	193.1(58%)	6		50	4.39	39	107
1	108	86	750	42	10.15	1.16	0.75	0.07	0.83	34.6	43.2(50%)	1		5	1.27	39	108
1	109	15	101L	43	0.00	0.06	0.06	0.00	0.06	16.2	8.1(54%)	101		101L	0.09	69	109
1	1108	25	103L	52	3.62	0.39	0.01	0.00	0.01	2.0	2.1(8%)	103		103L	0.63	69	1108
1 :		2940	MAX =	75	266.59	22.52	13.41	1.04	14.44	17.7	1284.9(44%)				29.76	PI =	23.4
2	201	808	2005	595*	116.98	370.20	30.68	336.11	366.79	1634.2	133.7(17%)	54	>	31C	274.08	85	201
2	202	51	96	814*	7.38	24.81	2.20	22.40	24.60	1736.5	6.3(12%)	3	>	5	18.34	10	202
2	203	892	2005	663*	128.59	415.17	32.71	378.72	411.42	1660.4	131.1(15%)	61	>	30C	307.20	85	203
2	204	70	96	1117*	10.09	34.90	2.73	31.89	34.62	1780.4	6.3(9%)	5		5	25.78	10	204
2	205	72	41	1003*	0.00	35.77	3.33	32.44	35.77	1788.5	7.2(10%)	5	>	0	26.24	25	205
2	207	138	39	1846*	16.46	71.79	5.98	65.27	71.25	1858.7	7.5(5%)	9		25	52.90	25	207
2	2098	15	201L	595*	2.17	7.07	0.58	6.24	6.82	1637.6	4.6(31%)	201		201L	13.86	85	2098
2	2108	25	203L	663*	3.60	11.65	0.92	10.61	11.54	1661.1	7.2(29%)	203		203L	23.32	85	2108
2 :		2071	MAX =1846*		285.26	971.31	79.13	883.64	962.77	1673.5	303.7(15%)				741.69	PI =	964.9
3	301	973	3400S	81	140.26	5.48	0.60	0.85	1.44	5.3	75.8(8%)	3		61	6.98	45	301
3	302	154	1600	77	22.20	1.58	0.34	0.62	0.96	22.4	20.0(13%)	1		5	1.70	17	302
3	303	941	3400S	79	138.57	11.26	6.56	0.73	7.29	27.9	822.2(87%)	29		61	16.77	45	303
3	304	73	1600	36	10.75	1.13	0.77	0.05	0.82	40.6	42.2(58%)	2		5	1.36	17	304
3	305	886	3400	74	0.00	8.98	8.44	0.54	8.98	36.5	751.0(85%)	26	>	0	10.72	44	305
3	306	115	1600	72	0.00	2.12	1.67	0.44	2.12	66.3	109.0(95%)	4		5	2.15	14	306
3	307	658	3400	55	80.95	8.82	5.99	0.17	6.16	33.7	969.7(86%)	19		52	11.03	44	307
3	308	82	1600	51	10.09	1.21	0.74	0.13	0.87	38.6	70.8(86%)	2		5	1.46	14	308
3	3098	15	301L	81	2.16	0.10	0.02	0.01	0.03	6.9	2.4(16%)	301		301L	0.53	45	3098
3	3108	25	303L	79	3.68	0.64	0.21	0.02	0.23	32.5	20.1(81%)	303		303L	1.09	45	3108
3 :		3922	MAX =	81	408.65	41.30	25.33	3.56	28.89	26.5	2477.1(63%)				53.77	PI =	46.1
4	401	910	3400S	47	134.01	5.17	1.12	0.10	1.21	4.8	214.3(24%)	8		62	7.59	72	401
4	402	67	1600	42	9.87	0.48	0.13	0.07	0.20	10.8	10.0(15%)	0		5	0.60	14	402
4	403	804	3400S	42	60.95	4.87	3.08	0.07	3.14	14.1	416.5(52%)	15		32	7.82	72	403
4	404	109	1600	68	8.26	2.17	1.58	0.35	1.93	63.8	101.9(93%)	3		5	2.51	14	404

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

120 SECOND CYCLE 60 STEPS

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
4	405	86	1760	18	0.00	0.82	0.81	0.01	0.82	34.3	64.6(75%)	2	>	0	0.96	34	405
4	407	312	1840	64	39.93	4.95	3.36	0.28	3.63	41.9	255.7(82%)	9		27	5.75	34	407
4	4098	15	401L	47	2.21	0.28	0.03	0.00	0.03	7.7	3.7(25%)	401		401L	0.44	72	4098
4	410	25	403L	42	0.00	0.10	0.10	0.00	0.10	14.1	12.9(52%)	403		403L	0.14	72	410
4 :		2328	MAX =	68	255.22	18.82	10.19	0.88	11.08	17.1	1079.6(46%)						
															25.81	PI =	18.6
5	501	167	3400	18	0.00	1.54	1.54	0.01	1.54	33.3	122.7(73%)	4	>	0	1.81	37	501
5	502	33	1200	12	0.00	0.33	0.32	0.00	0.33	35.8	24.8(75%)	1		5	0.38	37	502
5	503	197	3400	22	28.52	2.20	1.25	0.01	1.26	23.1	128.5(65%)	4		61	2.82	37	503
5	504	52	1200	19	7.53	0.84	0.58	0.01	0.59	41.0	43.1(83%)	1		5	0.99	37	504
5	505	447	3400	20	52.77	2.11	0.37	0.01	0.37	3.0	55.0(12%)	2		50	2.74	83	505
5	506	49	750	11	5.78	0.19	0.00	0.00	0.00	0.2	0.0(0%)	0		5	0.24	83	506
5	507	433	3400	20	51.12	2.81	1.12	0.01	1.13	9.4	169.9(39%)	6		50	3.88	83	507
5	508	29	750	6	3.42	0.21	0.10	0.00	0.10	12.2	14.0(48%)	0		5	0.29	83	508
5 :		1407	MAX =	22	149.14	10.22	5.28	0.05	5.33	13.6	557.9(40%)						
															13.15	PI =	9.2
6	601	264	3400	13	38.22	1.64	0.39	0.00	0.39	5.3	42.6(16%)	2		61	2.09	78	601
6	602	24	1000	4	3.47	0.12	0.00	0.00	0.00	0.3	2.7(11%)	0		5	0.16	78	602
6	603	240	3400	12	34.60	1.36	0.23	0.00	0.23	3.4	20.6(9%)	1		61	1.70	78	603
6	604	83	1000	14	11.96	0.48	0.09	0.00	0.09	4.0	7.4(9%)	0		5	0.60	78	604
6	605	144	3400	14	17.18	0.65	0.08	0.00	0.08	2.1	5.6(4%)	0		50	0.79	42	605
6	606	23	1150	7	2.74	0.09	0.00	0.00	0.00	0.1	0.0(0%)	0		5	0.21	42	606
6	607	180	3400	17	21.14	1.66	0.96	0.00	0.97	19.4	71.6(40%)	3		50	1.98	42	607
6	608	51	1150	16	5.99	0.23	0.02	0.01	0.03	2.0	13.4(26%)	1		5	0.34	42	608
6 :		1009	MAX =	17	135.30	6.23	1.77	0.02	1.79	6.4	163.8(16%)						
															7.87	PI =	2.9
7	701	232	3400	48	33.44	3.46	2.25	0.11	2.36	36.6	180.5(78%)	6		61	4.12	21	701
7	702	59	1275	43	8.51	1.03	0.68	0.08	0.75	46.1	52.9(90%)	2		5	1.20	21	702
7	703	54	3400	11	7.95	0.55	0.28	0.00	0.28	18.9	33.9(63%)	1		62	0.73	21	703
7	704	30	1000	28	4.42	0.32	0.15	0.03	0.17	20.9	17.4(58%)	1		5	0.41	21	704
7	705	942	3400	40	115.89	4.96	1.09	0.06	1.16	4.4	159.3(17%)	5		52	6.49	86	705
7	706	58	1600	40	7.14	0.57	0.27	0.06	0.33	20.6	34.9(60%)	1		5	0.73	13	706
7	707	816	3400	34	100.39	3.63	0.29	0.04	0.33	1.5	58.9(7%)	4		52	4.68	86	707
7	708	81	1600	55	9.21	1.55	1.08	0.17	1.25	55.5	56.6(70%)	2		5	1.61	15	708
7 :		2272	MAX =	55	286.93	16.06	6.09	0.55	6.64	10.5	594.3(26%)						
															19.97	PI =	10.8
8	801	139	1700	21	20.47	0.73	0.04	0.01	0.05	1.4	21.4(15%)	1		31	1.00	51	801
8	802	157	1600	26	23.12	1.23	0.45	0.02	0.47	10.7	33.7(21%)	1		5	1.48	51	802

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

120 SECOND CYCLE 60 STEPS

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
8	805	230	3400	13	29.44	1.06	0.10	0.00	0.09	1.4	11.2(5%)	0		54	1.33	69	805
8	807	114	1600	13	12.40	0.67	0.27	0.00	0.27	8.4	21.5(19%)	1		23	0.82	69	807
8	808	14	650	4	1.52	0.09	0.04	0.00	0.04	10.7	3.1(22%)	0		5	0.16	69	808
8 :		654	MAX =	26	86.94	3.78	0.89	0.03	0.92	5.1	90.9(14%)						
															4.80	PI =	1.6
9	901	576	3400	36	0.00	1.59	1.54	0.05	1.59	9.9	326.1(57%)	6	>	0	2.97	31D	901
9	902	40	660	15	0.00	0.13	0.12	0.01	0.13	11.4	22.8(57%)	0		5	0.22	31D	902
9	903	566	3400	36	32.00	1.77	0.67	0.05	0.72	4.6	202.4(36%)	5		24	2.99	31D	903
9	904	286	660	108*	16.17	15.18	1.27	13.38	14.65	184.4	249.8(87%)	9	>	51	12.81	31D	904
9	905	469	3400	55	55.37	3.31	1.33	0.17	1.50	11.5	269.7(58%)	6		50	4.89	18D	905
9	906	42	1600	10	4.96	0.27	0.10	0.00	0.10	8.8	19.6(47%)	0		5	0.39	18D	906
9	907	467	3400	103*	0.00	15.46	3.92	11.54	15.46	119.2	447.1(96%)	30	>	0	13.80	11D	907
9	908	40	1600	19	0.00	0.27	0.26	0.01	0.27	24.3	33.4(84%)	1		5	0.38	11D	908
9 :		2486	MAX =	108*	108.50	37.98	9.21	25.21	34.42	49.8	1571.0(63%)						
															38.44	PI =	45.3
10	1001	537	3400	23	47.38	2.26	0.70	0.01	0.71	4.7	131.7(25%)	6		37	3.20	83	1001
10	1002	34	1600	21	3.00	0.52	0.41	0.01	0.43	45.1	25.6(75%)	1		5	0.68	14	1002
10	1003	662	3400	30	95.43	3.62	0.46	0.03	0.49	2.7	63.5(10%)	2		61	4.62	80	1003
10	1004	51	1600	43	7.35	0.94	0.62	0.08	0.70	49.2	46.0(90%)	2		5	1.07	11	1004
10	1005	141	3400	21	16.56	1.06	0.50	0.01	0.51	13.1	50.4(36%)	2		50	1.34	26	1005
10	1006	69	900	46	8.10	0.71	0.35	0.10	0.45	23.3	28.1(41%)	2		5	0.82	26	1006
10	1007	349	3400	51	0.00	4.28	4.15	0.13	4.28	44.2	302.8(87%)	10	>	0	4.81	26	1007
10	1008	114	1200	57	0.00	1.65	1.46	0.19	1.65	52.0	102.4(90%)	3		5	1.77	26	1008
10 :		1957	MAX =	57	177.82	15.05	8.65	0.56	9.21	16.9	750.4(38%)						
															18.31	PI =	14.4
11	1101	659	3400	47	95.00	6.27	3.04	0.11	3.15	17.2	319.6(49%)	11		61	8.00	59	1101
11	1102	73	600	32	10.52	0.50	0.11	0.04	0.15	7.4	37.4(51%)	1		5	0.76	59	1102
11	1103	799	3400	58	117.66	8.22	4.36	0.19	4.55	20.5	343.4(43%)	13		62	10.10	59	1103
11	1104	26	510	14	3.83	0.28	0.15	0.01	0.15	20.9	12.3(47%)	0		5	0.34	59	1104
11	1105	623	3400	43	70.84	4.36	1.95	0.08	2.03	11.7	389.4(63%)	14		48	6.60	61	1105
11	1106	62	650	24	7.05	0.46	0.20	0.02	0.22	12.6	36.5(59%)	1		5	0.66	61	1106
11	1107	721	3400	50	0.00	5.02	4.90	0.12	5.02	25.1	496.6(69%)	17	>	0	6.42	61	1107
11	1108	77	575	34	0.00	0.58	0.53	0.04	0.58	27.0	51.4(67%)	2		5	0.71	61	1108
11 :		3040	MAX =	58	304.89	25.84	15.24	0.60	15.85	18.8	1686.6(55%)						
															33.57	PI =	27.6
12	1201	482	3400	22	70.98	2.88	0.54	0.01	0.55	4.1	69.6(14%)	2		62	3.70	80	1201
12	1202	32	650	8	4.71	0.21	0.05	0.00	0.05	5.9	6.5(20%)	0		5	0.27	80	1202
12	1203	816	3400	37	0.00	2.25	2.19	0.05	2.25	9.9	351.5(43%)	12	>	0	3.59	80	1203

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)	QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
12	1205	83	1700	16	9.03	0.95	0.65	0.01	0.65	28.4	62.8(76%)	2	23	1.21	40	1205
12	1206	229	1600	46	24.90	1.60	0.68	0.10	0.78	12.3	77.1(34%)	3	5	2.03	40	1206
12 :		1642	MAX =	46	109.62	7.88	4.11	0.17.	4.28	9.4	567.5(35%)			10.79	PI =	8.2
BN	9901	584	2500	23	33.02	1.08	0.00	0.00	0.00	0.0	0.0(0%)	0	12	1.35	NO CTL	9901
BN	9903	852	2500	34	75.17	2.47	0.00	0.00	0.00	0.0	0.0(0%)	0	19	3.07	NO CTL	9903
B-NECKS:		1436	MAX =	34	108.20	3.55	0.00	0.00	0.00	0.0	0.0(0%)			4.42	PI =	0.0

<SYSTEM WIDE TOTALS INCLUDING ALL LINKS>

TOTAL DISTANCE TRAVELED (VEH-MI/H)	TOTAL TRAVEL TIME (VEH-H/H)	TOTAL UNIFORM DELAY (VEH-H/H)	TOTAL RANDOM DELAY (VEH-H/H)	TOTAL DELAY (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	TOTAL UNIFORM STOPS (VEH/H-%)	TOTAL FUEL CONSUM (GAL/H)	PERFORMANCE INDEX	SPEED (MI/H)	
2681.81	1179.41	179.18	915.75	1094.56	145.05	11122.7(41%)	1001.75	1171.69	2.45	<TOTALS>
17.45	20.12	1.77	16.89	18.66	559.72	40.1(33%)	39.87	18.94	0.87	<BUSES>
2664.44	1159.37	177.42	898.89	1076.16	143.25	11082.7(41%)	961.89	1152.87	2.48	<OTHER>

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

TRANSYT-7F SIGNAL CONTROLLER SETTINGS

NETWORK-WIDE SIGNAL TIMING DATA

SYSTEM CYCLE LENGTH = 120 SECONDS

MASTER OFFSET REFERENCE LOCATION = INTERSECTION NO. 2

ALL OFFSETS ARE REFERENCED TO THE START OF INTERVAL NO. 1 AT THIS SIGNAL.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	8	4	65	4	35	4
INTVL LENGTH (%):	7	3	55	3	29	3
PIN SETTINGS (%):	100/0	7	10	65	68	97
PHASE START (PHF):	1		2		3	
INTERVAL TYPE :	V	Y	V	Y	V	Y
LINKS MOVING :	102		101		105	
	104		103		106	
			109		107	
			110		108	

OFFSET = 84 SEC. 70 %.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 2

INTERVAL NUMBER :		1	2	3	4	5	6	7
INTVL LENGTH(SEC):		6	4	81	4	8	13	4
INTVL LENGTH (%):		5	3	68	3	7	11	3
PIN SETTINGS (%):	100/0	5	8	76	79	86	97	
PHASE START (PH#):		1		2		3		
INTERVAL TYPE :		V	Y	V	Y	F	V	Y
LINKS MOVING :		202		201		205		
		204		203		207		
				209				
				210				

OFFSET = 0 SEC. 0 %.

THIS IS THE MASTER CONTROLLER.

+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 1.

INTERSECTION 3

INTERVAL NUMBER :		1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):		13	4	41	4	10	4	40	4
INTVL LENGTH (%):		11	3	36	3	8	3	33	3
PIN SETTINGS (%):	100/0	11	14	50	53	61	64	97	
PHASE START (PH#):		1		2		3		4	
INTERVAL TYPE :		V	Y	V	Y	V	Y	V	Y
LINKS MOVING :		302		301		306		305	
		304		303		308		307	
				309					
				310					

OFFSET = 48 SEC. 40 %.

+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 6.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 4

INTERVAL NUMBER :		1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):		10	4	44	24	4	18	12	4
INTVL LENGTH (%):		8	3	38	20	3	15	10	3
PIN SETTINGS (%):	100/0	8	11	49	69	72	87	97	
PHASE START (PH#):		1		2			3		
INTERVAL TYPE :		V	Y	V	F	Y	V	F	Y
LINKS MOVING :		402		401			405		
		404		403			407		
				409					
				410					

OFFSET = 16 SEC. 13 %.

+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 7.

INTERSECTION 5

INTERVAL NUMBER :		1	2	3	4	5	6	
INTVL LENGTH(SEC):		10	20	7	53	23	7	
INTVL LENGTH (%):		8	17	6	44	19	6	
PIN SETTINGS (%):	100/0	8	25	31	75	94		
PHASE START (PH#):		1			2			
INTERVAL TYPE :		V	F	Y	V	F	Y	
LINKS MOVING :		501			505			
		502			506			
		503			507			
		504			508			

OFFSET = 15 SEC. 12 %.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 6

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	47	24	7	23	12	7
INTVL LENGTH (%):	39	20	6	19	10	6
PIN SETTINGS (%):	100/0	39	59	65	84	94
PHASE START (PH#):	1			2		
INTERVAL TYPE :	V	F	Y	V	F	Y
LINKS MOVING :	601 602 603 604			605 606 607 608		

OFFSET = 29 SEC. 24 %.

INTERSECTION 7

INTERVAL NUMBER :	1	2	3	4	5	6	7	8	9	10	11
INTVL LENGTH(SEC):	9	4	2	67	4	2	9	4	5	10	4
INTVL LENGTH (%):	7	3	2	58	3	2	7	3	4	8	3
PIN SETTINGS (%):	100/0	7	10	12	70	73	75	82	85	89	97
PHASE START (PH#):	1			2			3		4		
INTERVAL TYPE :	V	Y	R	V	Y	R	V	Y	V	F	Y
LINKS MOVING :	707 708			705 707			705 706		701 702 703 704		

OFFSET = 72 SEC. 60 %.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 8

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	19	25	7	39	23	7
INTVL LENGTH (%):	16	21	6	32	19	6
PIN SETTINGS (%):	100/0	16	37	43	75	94
PHASE START (PH#):	1			2		
INTERVAL TYPE :	V	F	Y	V	F	Y
LINKS MOVING :	801 802			805 807 808		

OFFSET = 63 SEC. 52 %.

INTERSECTION 9

INTERVAL NUMBER :	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):	14	12	5	6	5	1	12	5	14	12	5	6	5	1	12	5
INTVL LENGTH (%):	12	10	4	5	4	1	10	4	12	10	4	5	4	1	10	4
PIN SETTINGS (%):	100/0	12	22	26	31	35	36	46	50	62	72	76	81	85	86	96
PHASE START (PH#):	1			2		3			1			2		3		
INTERVAL TYPE :	V	F	Y	V	Y	V	F	Y	V	F	Y	Y	Y	V	F	Y
LINKS MOVING :	901 902 903 904			907 908		905 906										

IELD POINT = 67 SEC. 56 %; REFERENCED TO START OF INTERVAL NO. 3

+++ 176 +++ WARNING - THE OFFSET (YIELD POINT) IS ALWAYS REFERENCED TO THE SECOND CYCLE OF A DOUBLE CYCLED SIGNAL.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 10

INTERVAL NUMBER :	1	2	3	4	5	6	7	8	9	10	11
INTVL LENGTH(SEC):	10	4	53	10	4	2	7	4	14	8	4
INTVL LENGTH (%):	8	3	45	8	3	2	6	3	12	7	3
PIN SETTINGS (%):	100/0	8	11	56	64	67	69	75	78	90	97
PHASE START (PH#):	1		2				3		4		
INTERVAL TYPE :	V	Y	V	F	Y	F	V	Y	V	F	Y
LINKS MOVING :	1001 1002		1001 1003				1003 1004		1005 1006 1007 1008		

OFFSET = 118 SEC. 98 %.

INTERSECTION 11

INTERVAL NUMBER :	1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):	27	22	8	4	25	22	8	4
INTVL LENGTH (%):	23	18	7	3	21	18	7	3
PIN SETTINGS (%):	100/0	23	41	48	51	72	90	97
PHASE START (PH#):	1				2			
INTERVAL TYPE :	V	F	Y	R	V	F	Y	R
LINKS MOVING :	1105 1106 1107 1108				1101 1102 1103 1104			

OFFSET = 58 SEC. 48 %.

+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 5.

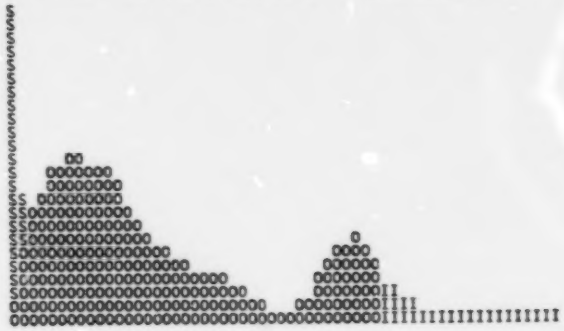
DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 12

INTERVAL NUMBER :	1	2	3	4	5	6	
INTVL LENGTH(SEC):	69	7	5	27	8	4	
INTVL LENGTH (%):	58	6	4	22	7	3	
PIN SETTINGS (%):	100/0	58	64	68	90	97	
PHASE START (PH#):	1			2			
INTERVAL TYPE :	V	F	Y	V	F	Y	
LINKS MOVING :	1201 1202 1203			1205 1206			

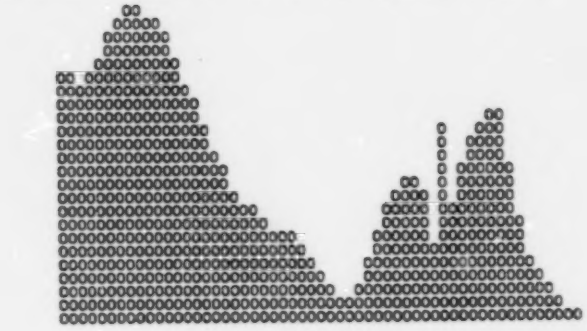
OFFSET = 112 SEC. 93 %.

LINK 1003 MAX FLOW 3399 VEH/H PLT. INDEX 0.70

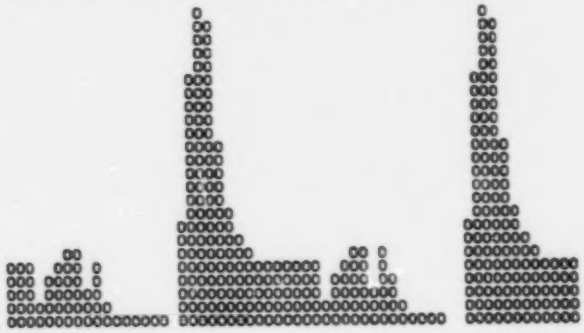


LINK 1001 MAX FLOW 3400 VEH/H PLT. INDEX 0.54

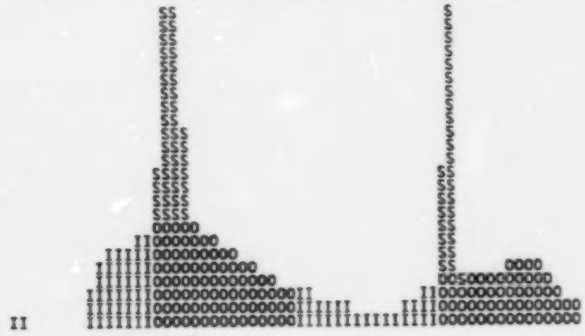
LINK 9903 MAX FLOW 1751 VEH/H PLT. INDEX 0.55



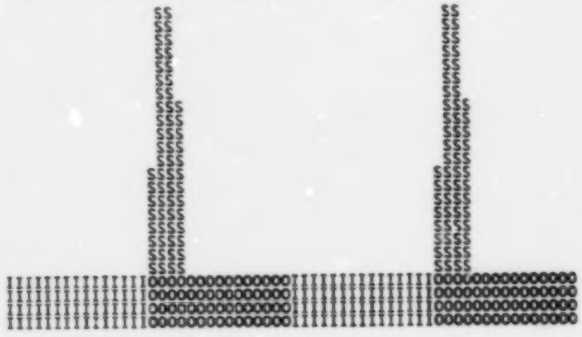
LINK 9901 MAX FLOW 2203 VEH/H PLT. INDEX 0.63



LINK 903 MAX FLOW 3400 VEH/H PLT. INDEX 0.50



LINK 901 MAX FLOW 3400 VEH/H PLT. INDEX 0.00



```
                                        TERMINATION  CARD

CARD    CARD
 NO.    TYPE

174)    90      0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0
--- PROGRAM NOTE --- END OF JOB!
```

```
12:00:41.8307       0.0000    CSP     ************************************************************************
12:00:41.8311       0.0001    CSP     *                  Ontario Centre for Large Scale Computation           *
12:00:41.8315       0.0001    CSP     ************************************************************************
12:00:41.8318       0.0002    CSP
12:00:41.8321       0.0002    CSP     Use the JCL statement "CRAYNEWS." to print the following notices in full.
12:00:41.8325       0.0003    CSP
12:00:41.8328       0.0003    CSP     Num   Date         Subject
12:00:41.8331       0.0004    CSP       1.  6-MAY-1987  CLSC ACCOUNTING.
12:00:41.8335       0.0004    CSP       2.  6-MAY-1987  CRAY PM SCHEDULE.
12:00:41.8338       0.0005    CSP       3. 25-MAY-1987  Subscribe to "The CLSC News".
12:00:41.8342       0.0005    CSP       4. 28-AUG-1987  CRAYHELP.  jcl to get info on CLSC cray software
12:00:41.8345       0.0006    CSP       5. 25-JAN-1988  NEWS account on vax front-end
12:00:41.8350       0.0006    CSP       6. 26-JUN-1989  Technical assistance is available.
12:00:41.8353       0.0007    CSP       7. 19-JAN-1990  UNICOS testing is now in progress.
12:00:41.8357       0.0007    CSP       8. 28-JAN-1990  AUTOTASKING is now available.
12:00:41.8361       0.0008    CSP       9. 14-FEB-1990  Supercomputer User Group (Friday, 2:00 PM)
12:00:41.8364       0.0008    CSP
12:00:41.8378       0.0008    CSP             Ontario Centre for Large Scale Computation                    02/16/90
12:00:41.8386       0.0008    CSP
12:00:41.8390       0.0008    CSP             CRAY-XMP/24 (SN103/24/04)       COS 1.17 - UP3D  BUILT  01/19/90
12:00:41.8394       0.0008    CSP
12:00:41.8398       0.0008    CSP
12:00:41.8749       0.0008    CSP     job,jn=trans,t=100.
12:00:41.9067       0.0019    CSP     account,ac=,us=,up=.
12:00:41.9075       0.0020    CSP
12:00:41.9079       0.0020    CSP     ..............................................................................
12:00:41.9082       0.0020    CSP
12:00:42.5609       0.0050    EXP     *delete,pdn=trans,id=trans.
12:00:42.5643       0.0053    CSP     fetch,dn=trans,text=.
12:01:18.0951       0.0053    SCP     Dataset transferred from remote task:
                                       VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
12:01:18.0954       0.0053    SCP     VAX TO CRAY: FILE=PLUTO$SIB2:[YSCOTT.JC.PARKER.TRANS]TRANS.FOR;5
12:01:18.0957       0.0053    SCP     VAX TO CRAY: 1025272 BYTES TRANSFERRED
12:01:18.0961       0.0053    SCP     SS004 - DATASET RECEIVED FROM FRONT END
12:01:19.7958       0.0053    SCP     *save,dn=trans,id=trans.
12:01:20.5195       0.0053    EXP     *access,dn=trans,id=trans.
12:01:20.5198       0.0053    EXP     cft77,e=x,i=trans,address=fast,trunc=32,integer=46.
12:01:20.6193       0.0059    CSP     FF001 - CFT77     VERSION 3.1      09/29/89 12:47:16
12:01:26.4071       0.0115    USER    FF002 - COMPILE TIME    33.541 SECONDS
12:04:07.7238      33.5471    USER    FF003 - 11670 SOURCE LINES
12:04:07.7249      33.5474    USER    FF004 - 0 ERRORS, 0 OTHER MESSAGES
12:04:07.7258      33.5477    USER    FF005 - CODE: 10641 WORDS, DATA: 11587 WORDS
12:04:07.7265      33.5481    USER    fetch,dn=file,text=.
12:04:08.2545      33.5508    CSP     Dataset transferred from remote task:
12:04:16.8128      33.5509    SCP      VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
12:04:16.8131      33.5509    SCP     VAX TO CRAY: FILE=PLUTO$SIB2:[YSCOTT.JC.PARKER.TRANS]FILE3.DAT;1
12:04:16.8134      33.5509    SCP     VAX TO CRAY: 14992 BYTES TRANSFERRED
12:04:16.8136      33.5509    SCP     SS004 - DATASET RECEIVED FROM FRONT END
12:04:17.3669      33.5509    SCP     assign,dn=file,a=ft05.
12:04:18.5628      33.5509    CSP     *dispose,dn=tt,text='usere:[yscottjc.list]trans.std'.       -
12:04:18.5647      33.5511    EXP     segldr;go.
12:04:18.6420      33.5515    CSP     SG000 - SEGLDR Version 5.0  - 10/02/89     (Chg-05/05/88 Patch-14)
12:04:18.7458      33.5527    USER      (c) Copyright Cray Research, Inc., 1983, 1987
12:04:18.7462      33.5527    USER    SG030 - 2 caution errors encountered
12:04:22.2492      33.9476    USER    SG001 - Begin execution
12:04:22.2540      33.9477    USER    UT010 - STOP            in $MAIN
12:04:32.4451      39.6878    USER
12:04:32.4481      39.6878    CSP     exit.
12:04:32.4495      39.6878    CSP     END OF JOB
12:04:32.4565      39.6879    CSP
```

```
12:04:32.4568   39.6879   CSP
12:04:33.2394   39.6881   USER
12:04:33.2399   39.6882   USER
12:04:33.2403   39.6882   USER
12:04:33.2407   39.6883   USER
12:04:33.2411   39.6883   USER
12:04:33.2416   39.6885   USER
12:04:33.2421   39.6886   USER
12:04:33.2427   39.6888   USER
12:04:33.2432   39.6889   USER
12:04:33.2437   39.6891   USER
12:04:33.2441   39.6891   USER
12:04:33.2446   39.6892   USER
12:04:33.2450   39.6893   USER
12:04:33.2454   39.6894   USER
12:04:33.2459   39.6894   USER
12:04:33.2464   39.6895   USER
12:04:33.2468   39.6896   USER
12:04:33.2478   39.6897   USER
12:04:33.2482   39.6897   USER
12:04:33.2487   39.6898   USER
12:04:33.2491   39.6899   USER
12:04:33.2498   39.6899   USER
12:04:33.2505   39.6900   USER
12:04:33.2509   39.6901   USER
12:04:33.2514   39.6902   USER
12:04:33.2518   39.6902   USER
12:04:33.2522   39.6903   USER
12:04:33.2527   39.6904   USER
12:04:33.2531   39.6904   USER
12:04:33.2537   39.6906   USER
12:04:33.2541   39.6906   USER

Job name -                                                    TRANS
User number -                                                YCRAY
Job class name -                                             SHORT
Job sequence number -                                        19856

Time executing in cpu -                                 0000:00:39.6881
Time waiting to execute -                               0000:02:49.8362
Time waiting for I/O -                                  0000:00:19.8129
Time waiting semaphore -                                0000:00:00.0000
Time waiting in input queue -                           0000:00:00.0016
Memory * CPU time (MWDS*sec) -                                17.13790
Memory * I/O wait time (MWDS*sec) -                            7.99104
Memory * Sem wait time (MWDS*sec) -                            0.00000
Minimum job size (words) -                                       50176
Maximum job size (words) -                                      634880
Minimum field length (words) -                                   45568
Maximum field length (words) -                                  629760
Minimum JTA size (words) -                                        4096
Maximum JTA size (words) -                                        5632
Disk sectors moved -                                             27491
FSS sectors moved -                                                  0
User I/O requests -                                                514
User I/O suspensions -                                            6577
Open calls -                                                        30
Close calls -                                                        8
Memory resident datasets -                                           0
Temporary datasets sectors used -                                  344
Permanent dataset sectors used -                                    92
Permanent dataset sectors saved -                                    0
Resource usage information not available.
Sectors received from front end -                                  255
```

Appendix F

T R A N S Y T - 7 F -- T R A F F I C S I G N A S Y S T E M O P T I M I Z A T I O N P R O G R A

RELEASE 3 FEB, 1983 VERSION 2.1

SPONSORED BY:
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC OPERATIONS

DEVELOPED BY:
TRANSPORT AND ROAD RESEARCH LABORATORY
UNITED KINGDOM AND
TRANSPORTATION RESEARCH CENTER
UNIVERSITY OF FLORIDA

I N P U T D A T A R E P O R T F O R R U N 1

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

NETWORK CONTROL CARD

CARD NO.	CARD TYPE	MIN CYCLE	MAX CYCLE	CYCLE INCR.	SEC/ STEP CYCLE	SEC/ STEP NORMAL	LOST TIME	GREEN EXTEN.	STOP PENALTY	OUTPUT LEVEL	INITIAL TIMINGS	PERIOD LENGTH	SEC(O) PERC(1)	SPD(O) TIME(1)	ENGL(O) METR(1)	PUNCH DECK(1)
1)	1	120	120	0	0	0	2	4	25	1	1	60	0	0	0	0

+++ 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE 60 SECONDS.
IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS PER CYCLE.

+++ 110 +++ WARNING + INITIAL TIMINGS HAVE BEEN REQUESTED IN FIELD 11.
TRANSYT-7F WILL IGNORE ANY OFFSET AND VARIABLE INTERVAL VALUES
CODED ON CARD TYPES 1X AND 18.
AN OPTIMIZATION RUN IS EXPECTED.

CARD NO.	CARD TYPE	LIST OF NODES TO BE OPTIMIZED														
2)	2	1	2	3	4	5	6	7	8	9	10	11	12	0	0	0

CARD NO.	CARD TYPE	LINKS HAVING SHARED STOPLINES FIRST SET				SECOND SET				THIRD SET						
3)	7	101	109	0	0	0	103	110	0	0	0	201	209	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
4)	7	203	210	0	0	0	301	309	0	0	0	303	310	0	0	0
5)	7	401	409	0	0	0	403	410	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	MASTER NODE	DEF. YELLOW	CLEARANCES ALL-RED	SYSTEM SATFLOW	EXTERNAL SPEED	SYSTEM SYSTEM PDF	MASTER FUEL FACTOR	DATA VEHICLE LENGTH							
6)	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- INPUT UNITS WERE SPECIFIED AS FOLLOWS:

* SPEED/TRAVEL TIME IN SPEED
* ENGLISH/METRIC UNITS IN ENGLISH
* TIMING UNITS IN SECONDS

INTERSECTION 1

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
7)	13	1	4	1	18	4	52	4	38	4	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
8)	21	1	1	1	2	0	10	102	104	0	0	0	0	0	0	0
9)	22	1	3	3	4	0	20	101	103	109	110	0	0	0	0	0
10)	23	1	5	5	6	0	24	105	106	107	108	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
11)	28	101	400	3400	800	0	0	0	35	0	0	0	0	0	0	0
12)	28	102	400	1600	46	0	0	0	35	0	0	0	0	0	0	5
13)	28	103	766	3400	956	50	203	711	35	205	24	30	207	40	30	0
14)	28	104	766	1600	100	0	203	91	35	0	0	0	0	0	0	5
15)	28	105	0	3400	530	0	0	0	0	0	0	0	0	0	0	0
16)	28	106	0	950	48	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT								
17)	29	106	4	0	0	0	0	0	0	0	0	0	0	0	0

RUN LE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK . AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
18)	28	107	625	3400	334	0	502	33	30	503	49	30	507	212	30	0
19)	28	108	625	750	86	0	507	76	30	0	0	0	0	0	0	5

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	FOURTH INPUT LINK NO.	VOL.	SPD/TT
20)	29	108	4	0	0	0	0

LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
21)	28	109	0	0	15	0	0	0	0	0	0	0	0	0	0	0
22)	28	110	766	0	25	0	210	25	3025	0	0	0	0	0	0	0

INTERSECTION 2

CONTROLLER TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
23)	13	2	0	1	8	4	80	4	8	12	4	0	0	0	0	0

PHASE TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT. FLAG
24)	21	2	1	1	2	0	10	202	204	0	0	0	0	0	0	0
25)	22	2	3	3	4	0	20	201	203	209	210	0	0	0	0	0
26)	23	2	5	6	7	0	24	205	207	0	0	0	0	0	0	0

LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
27)	28	201	766	200	808	0	106	48	30	107	104	30	101	586	35	0
28)	28	202	766	94	51	0	101	38	35	0	0	0	0	0	0	5
29)	28	203	762	200	892	0	303	873	35	305	153	30	308	82	30	0
30)	28	204	762	94	70	0	303	62	35	0	0	0	0	0	0	5
31)	28	205	0	41	72	0	0	0	0	0	0	0	0	0	0	0

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	FOURTH INPUT LINK NO.	VOL.	SPD/TT
32)	29	205	2	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
33)	28	207	630	39	138	0	607	65	30	603	49	30	602	24	30	0
34)	28	209	766	0	15	0	109	15	3030	0	0	0	0	0	0	0
35)	28	210	762	0	25	0	310	25	3000	0	0	0	0	0	0	0

INTERSECTION 3

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
36)	14	3	102	1	12	4	41	4	12	4	39	4	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE							CONT. FLAG
37)	21	3	1	1	2	0	10	302	304	0	0	0	0	0	0	0
38)	22	3	3	3	4	0	20	301	303	309	310	0	0	0	0	0
39)	23	3	5	5	6	0	10	306	308	0	0	0	0	0	0	0
40)	24	3	7	7	8	0	24	305	307	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
41)	28	301	762	3400	973	0	201	533	35	205	14	30	207	64	30	0
42)	28	302	762	1600	154	0	201	119	35	0	0	0	0	0	0	5
43)	28	303	777	3400	941	0	403	547	35	405	10	30	407	46	30	0
44)	28	304	777	1600	73	0	403	40	35	0	0	0	0	0	0	5
45)	28	305	0	3400	886	0	0	0	0	0	0	0	0	0	0	0
46)	28	306	0	1600	115	0	0	0	0	0	0	0	0	0	0	5
47)	28	307	650	3400	658	0	707	341	30	702	63	30	703	40	30	0
48)	28	308	650	1600	82	0	707	79	30	0	0	0	0	0	0	5
49)	28	309	762	0	15	0	209	15	3000	0	0	0	0	0	0	0
50)	28	310	777	0	25	0	410	25	3030	0	0	0	0	0	0	0

INTERSECTION 4

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
51)	13	4	82	1	8	4	56	24	4	8	12	4	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK OUT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
52)	21	4	1	1	2	0	10	402	404	0	0	0	0	0	0	0
53)	22	4	3	3	5	0	29	401	403	409	410	0	0	0	0	0
54)	23	4	6	6	8	0	24	405	407	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
55)	28	401	777	3400	910	0	301	652	35	306	115	30	307	132	30	0
56)	28	402	777	1600	67	0	301	51	35	0	0	0	0	0	0	5
57)	28	403	400	3400	804	0	0	0	35	0	0	0	0	0	0	0
58)	28	404	400	1600	109	0	0	0	35	0	0	0	0	0	0	5
59)	28	405	0	1760	86	0	0	0	0	0	0	0	0	0	0	0
60)	28	407	675	1840	312	0	807	160	30	802	127	30	0	0	0	0
61)	28	409	777	0	15	0	309	15	3030	0	0	0	0	0	0	0
62)	28	410	0	0	25	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 5

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
63)	12	5	49	1	14	20	7	49	23	7	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
64)	21	5	1	1	3	0	28	501	502	503	504	0	0	0	0	0
65)	22	5	4	4	6	0	31	505	506	507	508	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
66)	28	501	0	3400	167	0	0	0	0	0	0	0	0	0	0	0
67)	28	502	0	1200	33	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
68)	29	502	4	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
69)	28	503	766	3400	197	0	603	114	30	605	33	30	608	51	30	0
70)	28	504	766	1200	52	0	603	40	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START UTILIZAT.	CLEAR	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
71)	29	504	4	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
72)	28	505	625	3400	447	0	101	160	30	105	214	30	104	110	30	0
73)	28	506	625	750	49	0	105	44	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START UTILIZAT.	CLEAR	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
74)	29	506	4	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
75)	28	507	625	3400	433	0	907	322	30	902	40	30	903	100	30	0
76)	28	508	625	750	29	0	907	25	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START UTILIZAT.	CLEAR	LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT
77)	29	508	4	0	0	0	0	0

INTERSECTION 6

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
78)	12	6	53	1	47	24	7	23	12	7	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE								CONT. FLAG
79)	21	6	1	1	3	0	32	601	602	603	604	0	0	0	0	0

RUN TLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK JT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
80)	22	6	4	4	6	0	20	605	606	607	608	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
81)	28	601	766	3400	264	0	501	90	30	506	49	30	507	53	30	0
82)	28	602	766	1000	24	0	501	10	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT								
83)	29	602	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
84)	28	603	762	3400	240	0	703	82	30	705	59	30	708	61	30	0
85)	28	604	762	1000	83	0	703	40	30	705	40	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT								
86)	29	604	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
87)	28	605	630	3400	144	0	205	23	30	201	22	30	204	70	30	0
88)	28	606	630	1150	23	0	205	10	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.		LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT								
89)	29	606	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
90)	28	607	620	3400	180	0	1007	138	30	1002	42	30	1003	102	30	0
91)	28	608	620	1150	51	0	1007	48	30	0	0	0	0	0	0	5

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
92)	29	606	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 7

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
93)	14	7	44	1	30	4	2	7	4	2	29	4	24	10	4	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
94)	21	7	1	1	2	3	11	707	708	0	0	0	0	0	0	0
95)	22	7	4	4	5	6	11	705	707	0	0	0	0	0	0	0
96)	23	7	7	7	8	0	10	705	706	0	0	0	0	0	0	0
97)	24	7	9	9	11	0	19	701	702	703	704	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
98)	28	701	762	3400	232	0	601	166	30	606	23	30	607	43	30	0
99)	28	702	762	1275	59	0	601	43	30	607	16	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
100)	29	702	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
101)	28	703	777	3400	54	0	805	24	30	808	12	30	0	0	0	0
102)	28	704	777	1000	30	0	805	10	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD LOST-TIME	START CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
103)	29	704	4	0	0	0	0	0	0	0	0	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARKOUT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
104)	28	705	650	3400	942	0	301	182	30	304	73	30	305	687	30	0
105)	28	706	650	1600	58	0	301	13	30	305	45	30	0	0	0	5
106)	28	707	650	3400	816	0	1102	62	30	1103	117	30	1107	637	30	0
107)	28	708	600	1600	81	0	1103	14	30	1107	67	30	0	0	0	5

INTERSECTION 8

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
108)	12	8	3	1	28	25	7	30	23	7	0	0	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE							CONT. FLAG
109)	21	8	1	1	3	0	33	801	802	0	0	0	0	0	0	0
110)	22	8	4	4	6	0	31	805	807	808	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
111)	28	801	777	1700	139	0	701	96	30	706	43	30	0	0	0	0
112)	28	802	777	1600	157	0	701	80	30	707	77	30	0	0	0	5
113)	28	805	675	3400	230	0	401	94	30	404	95	30	405	62	30	0
114)	28	807	575	1600	114	0	1202	36	30	1203	78	30	0	0	0	0
115)	28	808	575	650	14	0	1203	14	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
116)	29	808	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 9

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
117)	13	9	0	3	0	12	5	0	5	0	12	5	0	0	0	1

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE MINIM. SECS.	TIMING DATA LINKS MOVING IN THIS PHASE								CONT. FLAG
118)	21	9	1	1	3	0	20	901	902	903	904	0	0	0	0	0
119)	22	9	4	4	5	0	10	907	908	0	0	0	0	0	0	0
120)	23	9	6	6	8	0	18	905	906	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
121)	28	901	0	3400	576	0	0	0	0	0	0	0	0	0	0	0
122)	28	902	0	660	40	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
123)	29	902	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
124)	28	903	300	3400	566	0	9903	560	30	0	0	0	0	0	0	0
125)	28	904	300	660	286	0	9903	286	30	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
126)	29	904	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
127)	28	905	625	3400	469	0	501	39	30	504	52	30	505	378	30	0
128)	28	906	625	1600	42	0	501	10	30	505	38	30	0	0	0	5
129)	28	907	0	3400	467	0	0	0	0	0	0	0	0	0	0	0
130)	28	908	0	1600	40	0	0	0	0	0	0	0	0	0	0	5

INTERSECTION 10

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
131)	14	10	37	1	22	4	14	10	4	2	28	4	20	8	4	0

RUN ,LE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK ,I AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE								CONT. FLAG
132)	21	10	1	1	2	0	10	1001	1002	0	0	0	0	0	0	0
133)	22	10	3	3	5	0	19	1001	1003	0	0	0	0	0	0	0
134)	23	10	7	7	8	0	10	1003	1004	0	0	0	0	0	0	0
135)	24	10	9	9	11	0	17	1005	1006	1007	1008	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
136)	28	1001	466	3400	537	0	9901	537	30	0	0	0	0	0	0	0
137)	28	1002	466	1600	34	0	9901	39	30	0	0	0	0	0	0	5
138)	28	1003	762	3400	662	0	1103	486	30	1105	99	30	1108	77	30	0
139)	28	1004	762	1600	51	0	1103	41	30	1105	10	30	0	0	0	5
140)	28	1005	620	3400	141	0	601	26	30	604	43	30	605	90	30	0
141)	28	1006	620	900	69	0	601	30	30	605	39	30	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
142)	29	1006	4	0	0	0	0	0	0	0	0	0	0	0	0	0

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
143)	28	1007	0	3400	349	0	0	0	0	0	0	0	0	0	0	0
144)	28	1008	0	1200	114	0	0	0	0	0	0	0	0	0	0	5

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			LINK DATA (CONTINUED) FOURTH INPUT LINK NO.	VOL.	SPD/TT							
145)	29	1008	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 11

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	CONTROLLER TIMING DATA INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
146)	12	11	104	1	26	22	8	4	26	22	8	4	0	0	0	0

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	PHASE TIMING DATA MINIM. SECS.	LINKS MOVING IN THIS PHASE								CONT. FLAG
147)	21	11	1	1	3	4	35	1105	1106	1107	1108	0	0	0	0	0

RUN TITLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
148)	22	11	5	5	7	8	35	1101	1102	1103	1104	0	0	0	0	0

							LINK DATA									
CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
149)	28	1101	762	3400	659	0	1001	500	30	1006	85	30	1007	74	30	0
150)	28	1102	762	600	73	0	1006	62	30	1007	11	30	0	0	0	5

							LINK DATA (CONTINUED)									
CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			FOURTH INPUT LINK NO.	VOL.	SPD/TT							
151)	29	1102	4	0	0	0	0	0	0	0	0	0	0	0	0	0

							LINK DATA									
CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
152)	28	1103	777	3400	799	0	1203	703	30	1205	96	30	0	0	0	0
153)	28	1104	777	510	26	0	1203	22	30	1205	10	30	0	0	0	5

							LINK DATA (CONTINUED)									
CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			FOURTH INPUT LINK NO.	VOL.	SPD/TT							
154)	29	1104	4	0	0	0	0	0	0	0	0	0	0	0	0	0

							LINK DATA									
CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
155)	28	1105	600	3400	623	0	701	61	30	704	23	30	705	539	30	0
156)	28	1106	600	650	62	0	701	10	30	705	55	30	0	0	0	5

							LINK DATA (CONTINUED)									
CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			FOURTH INPUT LINK NO.	VOL.	SPD/TT							
157)	29	1106	4	0	0	0	0	0	0	0	0	0	0	0	0	0

							LINK DATA									
CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
158)	28	1107	0	3400	721	0	0	0	0	0	0	0	0	0	0	0
159)	28	1108	0	575	77	0	0	0	0	0	0	0	0	0	0	5

RUN TLE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK JT AND DOUBLE CYCLE

FIELDS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			FOURTH INPUT LINK NO.	VOL.	SPD/TT							
160)	29	1108	4	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION 12

CONTROLLER TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	OFFSET/ YLD.PT.	REF INT	INTERVAL DURATIONS (SECS. OR PERCENT) INT1	INT2	INT3	INT4	INT5	INT6	INT7	INT8	INT9	INT10	INT11	DOUBLE CYCLE
161)	12	12	116	1	61	7	5	35	8	4	0	0	0	0	0	0

PHASE TIMING DATA

CARD NO.	CARD TYPE	NODE NO.	START INTVL	VARIAB. INTVL	YELLOW INTVL	ALL-RED INTVL	MINIM. SECS.	LINKS MOVING IN THIS PHASE						CONT. FLAG
162)	21	12	1	1	3	0	17	1201	1202	1203	0	0	0	0	0	0
163)	22	12	4	4	6	0	17	1205	1206	0	0	0	0	0	0	0

LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
164)	28	1201	777	3400	482	0	1101	392	30	1106	74	30	1107	16	30	0
165)	28	1202	777	650	32	0	1101	31	30	1107	10	30	0	0	0	5

LINK DATA (CONTINUED)

CARD NO.	CARD TYPE	LINK NO.	ADD START LOST-TIME	ADD CLEAR UTILIZAT.			FOURTH INPUT LINK NO.	VOL.	SPD/TT							
166)	29	1202	4	0	0	0	0	0	0	0	0	0	0	0	0	0

LINK DATA

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.
167)	28	1203	0	3400	816	0	0	0	0	0	0	0	0	0	0	0
168)	28	1205	575	1700	83	0	805	83	30	0	0	0	0	0	0	0
169)	28	1206	575	1600	229	0	801	150	30	805	79	30	0	0	0	5

BOTTLENECK LINKS

CARD NO.	CARD TYPE	LINK NO.	LINK LENGTH	SAT. FLOW	TOTAL VOL.	MID-BLK. VOL.	LINK DATA FIRST INPUT LINK.... NO.	VOL.	SPD/TT	SECOND INPUT LINK.... NO.	VOL.	SPD/TT	THIRD INPUT LINK.... NO.	VOL.	SPD/TT	QUEUE CAP.

CARD	CARD	LINK	LINK	SAT.	TOTAL	MID-BLK.	LINK DATA FIRST INPUT LINK....			SECOND INPUT LINK....			THIRD INPUT LINK....			QUEUE

NO.	TYPE	NO.	LENGTH	FLOW	VOL.	VOL.	NO.	VOL.	SPD/TT	NO.	VOL.	SPD/TT	NO.	VOL.	SPD/TT	CAP.
170)	-28	9901	300	2500	584	0	901	450	30	906	46	30	907	80	30	0
171)	-28	9903	466	2500	852	0	1003	652	30	1005	86	30	1008	114	30	0

RUN LE: DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK , AND DOUBLE CYCLE

FIELDS:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CARD NO.	CARD TYPE	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	GRAPH LINK NO.	PLOT LINK NO.	CARDS LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	LINK NO.	
172)	40	1003	1001	9903	9901	903	901	0	0	0	0	0	0	0	0	0
CARD NO.	CARD TYPE						RUN CARD									
173)	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES.
IF CARD TYPE 4 WAS INPUT, IT IS IGNORED.

--- PROGRAM NOTE --- NO ERRORS DETECTED. TRANSYT-7F NOW BEGINS FINAL PROCESSING.
IF ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

+++ 161 +++ WARNING + TOTAL NON-MIDBLOCK FLOW ON LINK 602 IS 240% GREATER THAN
THE SUM OF UPSTREAM INPUT FLOWS.

+++ 161 +++ WARNING + TOTAL NON-MIDBLOCK FLOW ON LINK 606 IS 230% GREATER THAN
THE SUM OF UPSTREAM INPUT FLOWS.

+++ 161 +++ WARNING + TOTAL NON-MIDBLOCK FLOW ON LINK 704 IS 300% GREATER THAN
THE SUM OF UPSTREAM INPUT FLOWS.

--- PROGRAM NOTE --- THERE ARE A TOTAL OF 12 NODES AND 96 LINKS (INCLUDING BOTTLENECKS, IF ANY) IN THIS RUN.

--- PROGRAM NOTE --- THERE WERE A TOTAL OF 5 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE

120 SECOND CYCLE 60 STEPS

<PERFORMANCE WITH OPTIMAL SETTINGS>

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
1	101	800	3400S	43	60.65	5.08	3.29	0.07	3.37	15.2	431.1(54%)	15		32	8.08	69	101
1	102	46	1600	35	3.49	0.81	0.66	0.05	0.71	55.6	42.2(92%)	1		5	1.02	12	102
1	103	956	3400S	52	134.79	4.75	0.76	0.13	0.89	3.4	97.5(10%)	3		61	6.52	69	103
1	104	100	1600	75	14.48	1.11	0.16	0.53	0.70	25.1	12.7(13%)	0		5	1.16	12	104
1	105	530	3400	51	0.00	5.13	5.00	0.13	5.13	34.9	419.8(79%)	14	>	0	6.08	39	105
1	106	48	950	18	0.00	0.45	0.44	0.01	0.45	33.9	35.3(73%)	1		5	0.53	39	106
1	107	334	3400	32	39.43	3.59	2.26	0.04	2.29	24.7	193.1(58%)	6		50	4.39	39	107
1	108	86	750	42	10.15	1.16	0.75	0.07	0.83	34.6	43.2(50%)	1		5	1.27	39	108
1	109	15	101L	43	0.00	0.06	0.06	0.00	0.06	15.2	8.1(54%)	101		101L	0.09	69	109
1	110B	25	103L	52	3.62	0.39	0.01	0.00	0.01	2.0	2.1(8%)	103		103L	0.63	69	110B
1 :		2940	MAX =	75	266.59	22.52	13.41	1.04	14.44	17.7	1284.9(44%)				29.76	PI =	23.4
2	201	808	200S	595*	116.98	370.20	30.68	336.11	366.79	1634.2	133.7(17%)	54	>	31C	274.08	85	201
2	202	51	94	814*	7.38	24.81	2.20	22.40	24.60	1736.5	6.3(12%)	3		5	18.34	10	202
2	203	892	200S	663*	128.59	415.17	32.71	378.72	411.42	1660.4	131.1(15%)	61	>	30C	307.20	85	203
2	204	70	94	1117*	10.09	34.90	2.73	31.89	34.62	1780.4	6.3(9%)	5		5	25.78	10	204
2	205	72	41	1003*	0.00	35.77	3.33	32.44	35.77	1788.5	7.2(10%)	5	>	0	26.24	25	205
2	207	138	39	1846*	16.46	71.79	5.98	65.27	71.25	1858.7	7.5(5%)	9		25	52.90	25	207
2	209B	15	201L	595*	2.17	7.07	0.58	6.24	6.82	1637.6	4.6(31%)	201		201L	13.86	85	209B
2	210B	25	203L	663*	3.60	11.65	0.92	10.61	11.54	1661.1	7.2(29%)	203		203L	23.32	85	210B
2 :		2071	MAX =	1846*	285.26	971.31	79.13	883.64	962.77	1673.5	303.7(15%)				741.69	PI =	964.9
3	301	973	3400S	81	140.26	5.48	0.60	0.85	1.44	5.3	75.8(8%)	3		61	6.98	45	301
3	302	154	1600	77	22.20	1.58	0.34	0.62	0.96	22.4	20.0(13%)	1		5	1.70	17	302
3	303	941	3400S	79	138.57	11.26	6.56	0.73	7.29	27.9	822.2(87%)	29		62	16.77	45	303
3	304	73	1600	36	10.75	1.13	0.77	0.05	0.82	40.6	42.2(58%)	2		5	1.34	17	304
3	305	886	3400	74	0.00	8.98	8.44	0.54	8.98	36.5	751.0(85%)	26	>	0	10.72	44	305
3	306	115	1600	72	0.00	2.12	1.67	0.44	2.12	66.3	109.0(95%)	4		5	2.15	14	306
3	307	658	3400	55	80.95	8.82	5.99	0.17	6.16	33.7	563.7(86%)	19		52	11.03	44	307
3	308	82	1600	51	10.09	1.21	0.74	0.13	0.87	38.4	70.8(86%)	2		5	1.46	14	308
3	309B	15	301L	81	2.16	0.10	0.02	0.01	0.03	6.9	2.4(16%)	301		301L	0.53	45	309B
3	310B	25	303L	79	3.68	0.64	0.21	0.02	0.23	32.5	20.1(81%)	303		303L	1.09	45	310B
3 :		3922	MAX =	81	408.65	41.30	25.33	3.56	28.89	26.5	2477.1(63%)				53.77	PI =	46.1
4	401	910	3400S	47	134.01	5.17	1.12	0.10	1.21	4.8	214.3(24%)	8		62	7.59	72	401
4	402	67	1600	42	9.87	0.48	0.13	0.07	0.20	10.8	10.0(15%)	0		5	0.60	14	402
4	403	804	3400S	42	60.95	4.87	3.08	0.07	3.14	14.1	416.5(52%)	15		32	7.82	72	403
4	404	109	1600	68	8.26	2.17	1.58	0.35	1.93	63.8	101.9(93%)	3		5	2.51	14	404

DAY A BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOU. - CYCLE 120 SECOND CYCLL 50 STEPS

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
4	405	86	1760	18	0.00	0.82	0.81	0.01	0.82	34.3	64.6(75%)	2	>	0	0.96	34	405
4	407	312	1840	64	39.93	4.95	3.36	0.28	3.63	41.9	255.7(82%)	9		27	5.75	34	407
4	409B	15	401L	47	2.21	0.28	0.03	0.00	0.03	7.7	3.7(25%)	401		401L	0.44	72	409B
4	410	25	403L	42	0.00	0.10	0.10	0.00	0.10	14.1	12.9(52%)	403		403L	0.14	72	410
4 :		2328	MAX =	68	255.22	18.82	10.19	0.88	11.08	17.1	1079.6(46%)				25.81 PI =		18.6
5	501	167	3400	18	0.00	1.54	1.54	0.01	1.54	33.3	122.7(73%)	4	>	0	1.81	37	501
5	502	33	1200	12	0.00	0.33	0.32	0.00	0.33	35.8	24.8(75%)	1		5	0.38	37	502
5	503	197	3400	22	28.52	2.20	1.25	0.01	1.26	23.1	128.5(65%)	4		61	2.82	37	503
5	504	52	1200	19	7.53	0.84	0.58	0.01	0.59	41.0	43.1(83%)	1		5	0.99	37	504
5	505	447	3400	20	52.77	2.11	0.37	0.01	0.37	3.0	55.0(12%)	2		50	2.74	83	505
5	506	49	750	11	5.78	0.19	0.00	0.00	0.00	0.2	0.0(0%)	0		5	0.24	83	506
5	507	433	3400	20	51.12	2.81	1.12	0.01	1.13	9.4	169.9(39%)	6		50	3.88	83	507
5	508	29	750	6	3.42	0.21	0.10	0.00	0.10	12.2	14.0(48%)	0		5	0.29	83	508
5 :		1407	MAX =	22	149.14	10.22	5.28	0.05	5.33	13.6	557.9(40%)				13.15 PI =		9.2
6	601	264	3400	13	38.22	1.64	0.39	0.00	0.39	5.3	42.6(16%)	2		61	2.09	78	601
6	602	24	1000	4	3.47	0.12	0.00	0.00	0.00	0.3	2.7(11%)	0		5	0.16	78	602
6	603	240	3400	12	34.60	1.36	0.23	0.00	0.23	3.4	20.6(9%)	1		61	1.70	78	603
6	604	83	1000	14	11.96	0.48	0.09	0.00	0.09	4.0	7.4(9%)	0		5	0.60	78	604
6	605	144	3400	14	17.18	0.65	0.08	0.00	0.08	2.1	5.6(4%)	0		50	0.79	42	605
6	606	23	1150	7	2.74	0.09	0.00	0.00	0.00	0.1	0.0(0%)	0		5	0.21	42	606
6	607	180	3400	17	21.14	1.66	0.96	0.00	0.97	19.4	71.6(40%)	3		50	1.98	42	607
6	608	51	1150	16	5.99	0.23	0.02	0.01	0.03	2.0	13.4(26%)	1		5	0.34	42	608
6 :		1009	MAX =	17	135.30	6.23	1.77	0.02	1.79	6.4	163.8(16%)				7.87 PI =		2.9
7	701	232	3400	48	33.44	3.46	2.25	0.11	2.36	36.6	180.5(78%)	6		61	4.12	21	701
7	702	59	1275	43	8.51	1.03	0.68	0.08	0.75	46.1	52.9(90%)	2		5	1.20	21	702
7	703	54	3400	11	7.95	0.55	0.28	0.00	0.28	18.9	33.9(63%)	1		62	0.73	21	703
7	704	30	1000	28	4.42	0.32	0.15	0.03	0.17	20.9	17.4(58%)	1		5	0.41	21	704
7	705	942	3400	40	115.89	4.96	1.09	0.06	1.16	4.4	159.3(17%)	5		52	6.49	86	705
7	706	58	1600	40	7.14	0.57	0.27	0.06	0.33	20.6	34.9(60%)	1		5	0.73	13	706
7	707	816	3400	34	100.39	3.63	0.29	0.04	0.33	1.5	58.9(7%)	4		52	4.68	86	707
7	708	81	1600	55	9.21	1.55	1.08	0.17	1.25	55.5	56.6(70%)	2		5	1.61	15	708
7 :		2272	MAX =	55	286.93	16.06	6.09	0.55	6.64	10.5	594.3(26%)				19.97 PI =		10.8
8	801	139	1700	21	20.47	0.73	0.04	0.01	0.05	1.4	21.4(15%)	1		31	1.00	51	801
8	802	157	1600	26	23.12	1.23	0.45	0.02	0.47	10.7	33.7(21%)	1		5	1.48	51	802

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE — 120 SECOND CYCLE 60 STEPS

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)		QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
8	805	230	3400	13	29.44	1.06	0.10	0.00	0.09	1.4	11.2(5%)	0		54	1.33	69	805
8	807	114	1600	13	12.40	0.67	0.27	0.00	0.27	8.4	21.5(19%)	1		23	0.82	69	807
8	808	14	650	4	1.52	0.09	0.04	0.00	0.04	10.7	3.1(22%)	0		5	0.16	69	808
8 :		654	MAX =	26	86.94	3.78	0.89	0.03	0.92	5.1	90.9(14%)				4.80	PI =	1.6
9	901	576	3400	36	0.00	1.59	1.54	0.05	1.59	9.9	326.1(57%)	6	>	0	2.97	31D	901
9	902	40	660	15	0.00	0.13	0.12	0.01	0.13	11.4	22.8(57%)	0		5	0.22	31D	902
9	903	566	3400	36	32.00	1.77	0.67	0.05	0.72	4.6	202.4(36%)	5		24	2.99	31D	903
9	904	286	660	108*	16.17	15.18	1.27	13.38	14.65	184.4	249.8(87%)	9	>	5I	12.81	31D	904
9	905	469	3400	55	55.37	3.31	1.33	0.17	1.50	11.5	269.7(58%)	6		50	4.89	18D	905
9	906	42	1600	10	4.96	0.27	0.10	0.00	0.10	8.8	19.6(47%)	0		5	0.39	18D	906
9	907	467	3400	103*	0.00	15.46	3.92	11.54	15.46	119.2	447.1(96%)	30	>	0	13.80	11D	907
9	908	40	1600	19	0.00	0.27	0.26	0.01	0.27	24.3	33.4(84%)	1		5	0.38	11D	908
9 :		2486	MAX =	108*	108.50	37.98	9.21	25.21	34.42	49.8	1571.0(63%)				38.44	PI =	45.3
10	1001	537	3400	23	47.38	2.26	0.70	0.01	0.71	4.7	131.7(25%)	6		37	3.20	83	1001
10	1002	34	1600	21	3.00	0.52	0.41	0.01	0.43	45.1	25.6(75%)	1		5	0.68	14	1002
10	1003	662	3400	30	95.43	3.62	0.46	0.03	0.49	2.7	63.5(10%)	2		61	4.62	80	1003
10	1004	51	1600	43	7.35	0.94	0.62	0.08	0.70	49.2	46.0(90%)	2		5	1.07	11	1004
10	1005	141	3400	21	16.56	1.06	0.50	0.01	0.51	13.1	50.4(36%)	2		50	1.34	26	1005
10	1006	69	900	46	8.10	0.71	0.35	0.10	0.45	23.3	28.1(41%)	1		5	0.82	26	1006
10	1007	349	3400	51	0.00	4.28	4.15	0.13	4.28	44.2	302.8(87%)	10	>	0	4.81	26	1007
10	1008	114	1200	57	0.00	1.65	1.46	0.19	1.65	52.0	102.4(90%)	3		5	1.77	26	1008
10 :		1957	MAX =	57	177.82	15.05	8.65	0.56	9.21	16.9	750.4(38%)				18.31	PI =	14.4
11	1101	659	3400	47	95.00	6.27	3.04	0.11	3.15	17.2	319.6(49%)	11		61	8.00	59	1101
11	1102	73	600	32	10.52	0.50	0.11	0.04	0.15	7.4	37.4(51%)	1		5	0.75	59	1102
11	1103	799	3400	58	117.66	8.42	4.36	0.19	4.55	20.5	343.4(43%)	13		62	10.10	59	1103
11	1104	26	510	14	3.83	0.28	0.15	0.01	0.15	20.9	12.3(47%)	0		5	0.34	59	1104
11	1105	623	3400	43	70.84	4.36	1.95	0.08	2.03	11.7	389.4(63%)	14		48	6.60	61	1105
11	1106	62	650	24	7.05	0.45	0.20	0.02	0.22	12.6	36.5(59%)	1		5	0.66	61	1106
11	1107	721	3400	50	0.00	5.02	4.90	0.12	5.02	25.1	496.6(69%)	17	>	0	6.42	61	1107
11	1108	77	575	34	0.00	0.58	0.53	0.04	0.58	27.0	51.4(67%)	2		5	0.71	61	1108
11 :		3040	MAX =	58	304.89	25.86	15.24	0.60	15.85	18.8	1686.6(55%)				33.57	PI =	27.6
12	1201	482	3400	22	70.98	2.88	0.54	0.01	0.55	4.1	69.6(14%)	2		62	3.70	80	1201
12	1202	32	650	8	4.71	0.21	0.05	0.00	0.05	5.9	6.5(20%)	0		5	0.27	80	1202
12	1203	816	3400	37	0.00	2.25	2.19	0.05	2.25	9.9	351.5(43%)	12	>	0	3.59	80	1203

DAY A BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOL . CYCLE 120 SECOND CYCL: O STEPS

NODE NO	LINK NO	FLOW (VEH/H)	SAT FLOW (VEH/H)	DEGREE OF SAT (%)	TOTAL TRAVEL (VEH-MI/H)	TOTAL TIME (VEH-H/H)	DELAY UNIFORM (VEH-H/H)	DELAY RANDOM (VEH-H/H)	DELAY TOTAL (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	UNIFORM STOPS (VEH/H;%)	MAX BACK OF QUEUE (VEH/LK)	QUEUE CAPACITY (VEH/LK)	FUEL CONSUM (GAL/H)	PHASE LENGTH (SEC)	LINK NO
12	1205	83	1700	16	9.03	0.95	0.65	0.01	0.65	28.4	62.8(76%)	2	23	1.21	40	1205
12	1206	229	1600	46	24.90	1.60	0.68	0.10	0.78	12.3	77.1(34%)	3	5	2.03	40	1206
12 :		1642	MAX =	46	109.62	7.88	4.11	0.17	4.28	9.4	567.5(35%)			10.79	PI =	8.2
BN	9901	584	2500	23	33.02	1.08	0.00	0.00	0.00	0.0	0.0(0%)	0	12	1.35	NO CTL	9901
BN	9903	852	2500	34	75.17	2.47	0.00	0.00	0.00	0.0	0.0(0%)	0	19	3.07	NO CTL	9903
B-NECKS:		1436	MAX =	34	108.20	3.55	0.00	0.00	0.00	0.0	0.0(0%)			4.42	PI =	0.0

<SYSTEM WIDE TOTALS INCLUDING ALL LINKS>

TOTAL DISTANCE TRAVELED (VEH-MI/H)	TOTAL TRAVEL TIME (VEH-H/H)	TOTAL UNIFORM DELAY (VEH-H/H)	TOTAL RANDOM DELAY (VEH-H/H)	TOTAL DELAY (VEH-H/H)	AVERAGE DELAY (SEC/VEH)	TOTAL UNIFORM STOPS (VEH/H-%)	TOTAL FUEL CONSUM (GAL/H)	PERFORMANCE INDEX	SPEED (MI/H)	
2681.81	1179.41	179.18	915.75	1094.56	145.05	11122.7(41%)	1001.75	1171.69	2.45	<TOTALS>
17.45	20.12	1.77	16.89	18.66	559.72	40.1(33%)	39.87	18.94	0.87	<BUSES>
2664.44	1159.37	177.42	898.89	1076.16	143.25	11082.7(41%)	961.89	1152.87	2.48	<OTHER>

DAYTONA BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOUBLE CYCLE 120 SECOND CYCLE 60 STEPS

TRANSYT-7F SIGNAL CONTROLLER SETTINGS

NETWORK-WIDE SIGNAL TIMING DATA

SYSTEM CYCLE LENGTH = 120 SECONDS

MASTER OFFSET REFERENCE LOCATION = INTERSECTION NO. 2

ALL OFFSETS ARE REFERENCED TO THE START OF INTERVAL NO. 1 AT THIS SIGNAL.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	8	4	65	4	35	4
INTVL LENGTH (%):	7	3	55	3	29	3
PIN SETTINGS (%):	100/0	7	10	65	68	97
PHASE START (PH#):	1		2		3	
INTERVAL TYPE :	V	Y	V	Y	V	Y

LINKS MOVING :

102	101	105
104	103	106
	109	107
	110	108

OFFSET = 84 SEC. 70 %.

INTERSECTION 2

INTERVAL NUMBER :	1	2	3	4	5	6	7
INTVL LENGTH(SEC):	6	4	81	4	8	13	4
INTVL LENGTH (%):	5	3	68	3	7	11	3
PIN SETTINGS (%):	100/0	5	8	76	79	86	97
PHASE START (PH#):	1		2		3		
INTERVAL TYPE :	V	Y	V	Y	F	V	Y
LINKS MOVING :	202		201		205		
	204		203		207		
			209				
			210				

OFFSET = 0 SEC. 0 %.

THIS IS THE MASTER CONTROLLER.

+++ 193 +++ WARNING + THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 1.

INTERSECTION 3

INTERVAL NUMBER :	1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):	13	4	41	4	10	4	40	4
INTVL LENGTH (%):	11	3	36	3	8	3	33	3
PIN SETTINGS (%):	100/0	11	14	50	53	61	64	97
PHASE START (PH#):	1		2		3		4	
INTERVAL TYPE :	V	Y	V	Y	V	Y	V	Y
LINKS MOVING :	302		301		306		305	
	304		303		308		307	
			309					
			310					

OFFSET = 48 SEC. 40 %.

+++ 193 +++ WARNING + THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 6.

INTERSECTION 4

INTERVAL NUMBER :	1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):	10	4	44	24	4	18	12	4
INTVL LENGTH (%):	8	3	38	20	3	15	10	3
PIN SETTINGS (%):	100/0	8	11	49	69	72	87	97
PHASE START (PH#):	1		2			3		
INTERVAL TYPE :	V	Y	V	F	Y	V	F	Y
LINKS MOVING :	402 404		401 403 409 410			405 407		

OFFSET = 16 SEC. 13 %.

+++ 193 +++ WARNING + THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 7.

INTERSECTION 5

INTERVAL NUMBER :	1	2	3	4	5	6	
INTVL LENGTH(SEC):	10	20	7	53	23	7	
INTVL LENGTH (%):	8	17	6	44	19	6	
PIN SETTINGS (%):	100/0	8	25	31	75	94	
PHASE START (PH#):	1			2			
INTERVAL TYPE :	V	F	Y	V	F	Y	
LINKS MOVING :	501 502 503 504			505 506 507 508			

OFFSET = 15 SEC. 12 %.

DAY , BEACH - ADDED BUS LINKS, BOTTLENECK, PARK LOT AND DOU. CYCLE 120 SECOND CYCLE 60 STEPS

INTERSECTION 6

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	47	24	7	23	12	7
INTVL LENGTH (%):	39	20	6	19	10	6
PIN SETTINGS (%):	100/0	39	59	65	84	94
PHASE START (PH#):	1			2		
INTERVAL TYPE :	V	F	Y	V	F	Y
LINKS MOVING :	601 602 603 604			605 606 607 608		

OFFSET = 29 SEC. 24 %.

INTERSECTION 7

INTERVAL NUMBER :	1	2	3	4	5	6	7	8	9	10	11
INTVL LENGTH(SEC):	9	4	2	67	4	2	9	4	5	10	4
INTVL LENGTH (%):	7	3	2	58	3	2	7	3	4	8	3
PIN SETTINGS (%):	100/0	7	10	12	70	73	75	82	85	89	97
PHASE START (PH#):	1			2			3		4		
INTERVAL TYPE :	V	Y	R	V	Y	R	V	Y	V	F	Y
LINKS MOVING :	707 708			705 707			705 706		701 702 703 704		

OFFSET = 72 SEC. 60 %.

INTERSECTION 8

INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	19	25	7	39	23	7
INTVL LENGTH (%):	16	21	6	32	19	6
PIN SETTINGS (%):	100/0	16	37	43	75	94
PHASE START (PH#):	1			2		
INTERVAL TYPE :	V	F	Y	V	F	Y
LINKS MOVING :	801 802			805 807 808		

OFFSET = 63 SEC. 52 %.

INTERSECTION 9

INTERVAL NUMBER :	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):	14	12	5	6	5	1	12	5	14	12	5	6	5	1	12	5
INTVL LENGTH (%):	12	10	4	5	4	1	10	4	12	10	4	5	4	1	10	4
PIN SETTINGS (%):	100/0	12	22	26	31	35	36	46	50	62	72	76	81	85	86	96
PHASE START (PH#):	1			2		3			1			2		3		
INTERVAL TYPE :	V	F	Y	V	Y	V	F	Y	V	F	Y	V	Y	V	F	Y
LINKS MOVING :	901 902 903 904			907 908		905 906										

YIELD POINT = 67 SEC. 56 %; REFERENCED TO START OF INTERVAL NO. 3

+++ 176 +++ WARNING - THE OFFSET (YIELD POINT) IS ALWAYS REFERENCED TO THE SECOND CYCLE OF A DOUBLE CYCLED SIGNAL.

INTERSECTION 10

INTERVAL NUMBER :	1	2	3	4	5	6	7	8	9	10	11
INTVL LENGTH(SEC):	10	4	53	10	4	2	7	4	14	8	4
INTVL LENGTH (%):	8	3	45	8	3	2	6	3	12	7	3
PIN SETTINGS (%): 100/0	8	11	56	64	67	69	75	78	90	97	
PHASE START (PH#):	1		2				3		4		
INTERVAL TYPE :	V	Y	V	F	Y	F	V	Y	V	F	Y
LINKS MOVING :	1001		1001				1003		1005		
	1002		1003				1004		1006		
									1007		
									1008		

OFFSET = 110 SEC. 98 %.

INTERSECTION 11

INTERVAL NUMBER :	1	2	3	4	5	6	7	8
INTVL LENGTH(SEC):	27	22	8	4	25	22	8	4
INTVL LENGTH (%):	23	18	7	3	21	18	7	3
PIN SETTINGS (%): 100/0	23	41	48	51	72	90	97	
PHASE START (PH#):	1				2			
INTERVAL TYPE :	V	F	Y	R	V	F	Y	R
LINKS MOVING :	1105				1101			
	1106				1102			
	1107				1103			
	1108				1104			

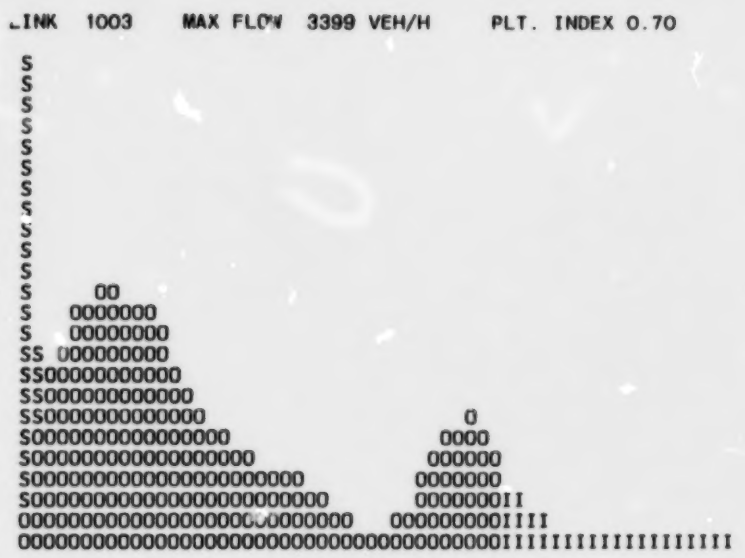
OFFSET = 58 SEC. 48 %.

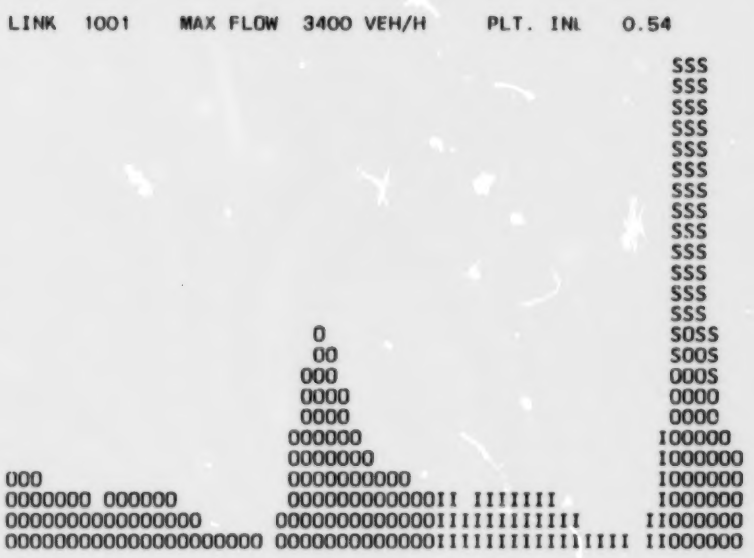
+++ 193 +++ WARNING - THE OFFSET FALLS WITHIN 1% OF AN INTERVAL CHANGE POINT AT THE START OF INTERVAL NO. 5.

INTERSECTION 12

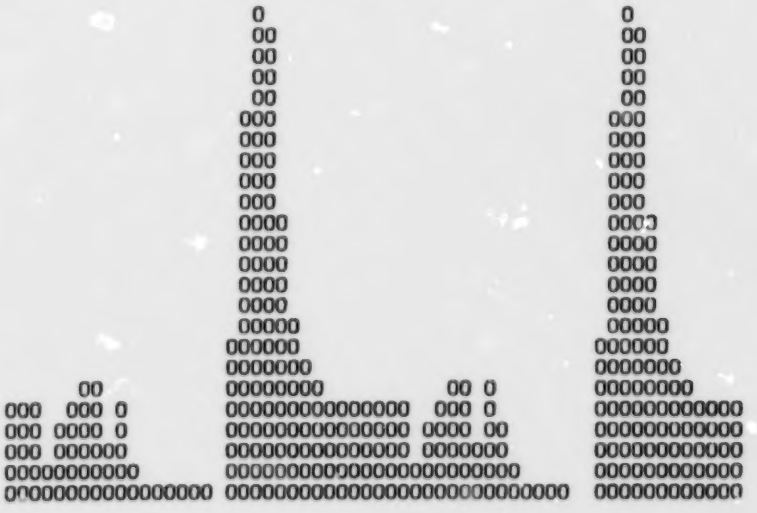
INTERVAL NUMBER :	1	2	3	4	5	6
INTVL LENGTH(SEC):	69	7	5	27	8	4
INTVL LENGTH (%):	58	6	4	22	7	3
PIN SETTINGS (%):	100/0	58	64	68	90	97
PHASE START (PH#):	1			2		
INTERVAL TYPE :	V	F	Y	V	F	Y
LINKS MOVING :	1201 1202 1203			1205 1206		

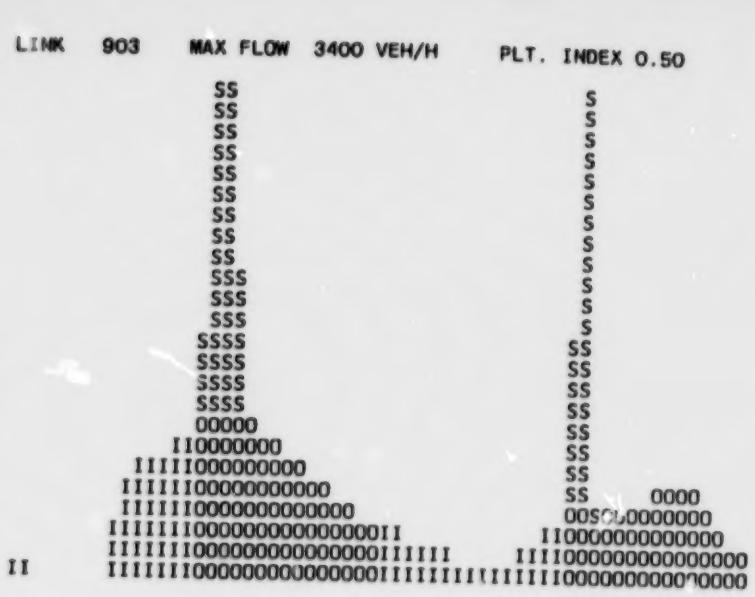
OFFSET = 112 SEC. 93 %.

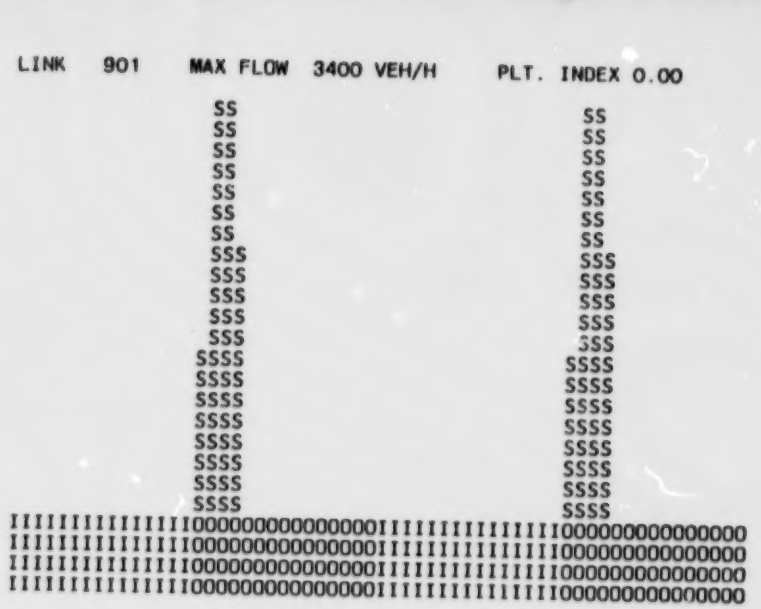

LINK 1003 MAX FLOW 3399 VEH/H PLT. INDEX 0.70


LINK 1001 MAX FLOW 3400 VEH/H PLT. INDEX 0.54

LINK 9903 MAX FLOW 1751 VEH/H PLT. INDEX 0.55


LINK 9901 MAX FLOW 2203 VEH/H PLT. INDEX 0.63


LINK 903 MAX FLOW 3400 VEH/H PLT. INDEX 0.50


LINK 901 MAX FLOW 3400 VEH/H PLT. INDEX 0.00

1 .INATION CARD

CARD NO.	CARD TYPE														
174)	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0

--- PROGRAM NOTE --- END OF JOB!

	Routine	Time executing		Called	Average T							
2	$MAIN	0.001	(0.02%)	1	0.001	@00000200a	Called by	*SYSTEM				
1	*SYSTEM	>>>	(0.00%)	1	>>>	@00000000a	Called by					
8	CDECHO	0.037	(0.65%)	174	>	Called by	CONTRL	MODS	NETWK	NODED	POSPRO	RUN
	@00025666d						1	1	5	165	1	1
6	CONTRL	>	(0.01%)	1	>	@00004432a	Called by	TINPUT				
34	CYCOPT	>	(0.00%)	1	>	@00027522a	Called by	$MAIN				
11	ERROR	0.002	(0.04%)	10	>	Called by	CONTRL	SIGTIM	TINPUT			
	@00014363a						2	5	3			
42	FUEL	>	(0.00%)	96	>	@00054163a	Called by	TOUTP				
38	HILLCL	0.003	(0.05%)	1	0.003	@00040477a	Called by	CYCOPT				
5	INIT	>	(0.01%)	1	>	@00002203a	Called by	TINPUT				
33	INSERT	>	(0.00%)	9	>	@00031405a	Called by	LINLIS				
31	LAST	>	(0.01%)	200	>	Called by	LINLIS	RTEBLD				
	@00031551a						88	112				
29	LINLIS	0.001	(0.02%)	1	0.001	@00030760a	Called by	TINPUT				
47	LNKMOV	0.008	(0.15%)	12	>	@00055700a	Called by	SIGTIM				
23	MODS	>	(0.01%)	1	>	@00012527a	Called by	TINPUT				
40	MODUL	0.101	(1.77%)	11257	>	@00033100a	Called by	SUBPT				
14	NETWK	>	(0.01%)	5	>	@00005540a	Called by	TINPUT				
18	NODED	0.033	(0.58%)	166	>	@00006767a	Called by	TINPUT				
4	PAGE	0.008	(0.13%)	281	>	Called by	CDECHO	CONTRL	ERROR	MODS	NETWK	NODED	RUN
	@00002337a						173	1	5	1	3	92	2
							TINPUT						
							4						
43	POSPRO	>	(0.01%)	1	>	@00046052a	Called by	$MAIN				
35	PREPAR	>	(0.00%)	1	>	@00030160a	Called by	CYCOPT				
22	PROCES	0.007	(0.13%)	13	>	@00026045a	Called by	NODED				
10	RANGE	0.002	(0.03%)	788	>	Called by	CONTRL	NETWK	NODED			
	@00025635a						14	7	767			
30	RTEBLD	0.001	(0.02%)	23	>	@00031630a	Called by	LINLIS				
26	RUN	>	(0.01%)	1	>	@00013471a	Called by	TINPUT				
45	SIGTIM	0.015	(0.26%)	1	0.015	@00047641a	Called by	POSPRO				
48	SPLOT	0.047	(0.82%)	1	0.047	@00034022a	Called by	POSPRO				
37	STAR1	0.022	(0.38%)	1	0.022	@00032045a	Called by	CYCOPT				
36	STPLST	>	(0.00%)	1	>	@00030437a	Called by	PREPAR				
39	SUBPT	5.347	(93.53%)	377	0.014	@00035334a	Called by	HILLCL				
3	TINPUT	0.030	(0.52%)	1	0.030	@00002441a	Called by	$MAIN				
41	TOUTP	0.047	(0.82%)	9	0.005	@00041702a	Called by	HILLCL				
* * *	TOTAL	5.716		13436	Total calls							

```
F   , W T R A C E  --  Calling tree
  1   *SYSTEM  00000000a
  2     $MAIN    00000200a
  3       TINPUT   00002441a
  4         PAGE     00002337a
  5         INIT     00002203a
  6         CONTRL   00004432a
  7           PAGE     00002337a
  8           CDECHO   00025666d
  9             PAGE     00002337a
 10           RANGE    00025635a
 11           ERROR    00014363a
 12             PAGE     00002337a
 13         ERROR    00014363a(TREE AT     11)
 14         NETWK    00005540a
 15           PAGE     00002337a
 16           CDECHO   00025666d(TREE AT      8)
 17           RANGE    00025635a
 18         NODED    00006767a
 19           PAGE     00002337a
 20           CDECHO   00025666d(TREE AT      8)
 21           RANGE    00025635a
 22           PROCES   00026045a
 23         MODS     00012527a
 24           PAGE     00002337a
 25           CDECHO   00025666d(TREE AT      8)
 26         RUN      00013471a
 27           PAGE     00002337a
 28           CDECHO   00025666d(TREE AT      8)
 29         LINLIS   00030760a
 30           RTEBLD   00031630a
 31             LAST     00031551a
 32           LAST     00031551a
 33           INSERT   00031405a
 34       CYCOPT   00027522a
 35         PREPAR   00030160a
 36           STPLST   00030437a
 37         STAR1    00032045a
 38         HILLCL   00040477a
 39           SUBPT    00035334a
 40             MODUL    00033100a
 41           TOUTP    00041702a
 42             FUEL     00054163a
 43       POSPRO   00046052a
 44         CDECHO   00025666d(TREE AT      8)
 45         SIGTIM   00047641a
 46           ERROR    00014363a(TREE AT     11)
 47           LNKMOV   00055700a
 48         SPLOT    00034022a
```

```
09:37:16.4773      0.0000    CSP     ********************************************************************************
09:37:16.4777      0.0001    CSP     *                    Ontario Centre for Large Scale Computation                 *
09:37:16.4780      0.0001    CSP     ********************************************************************************
09:37:16.4783      0.0002    CSP
09:37:16.4787      0.0002    CSP     Use the JCL statement "CRAYNEWS." to print the following notices in full.
09:37:16.4790      0.0003    CSP
09:37:16.4857      0.0003    CSP     Num   Date         Subject
09:37:16.4861      0.0004    CSP       1.  6-MAY-1987   CLSC ACCOUNTING.
09:37:16.4864      0.0004    CSP       2.  6-MAY-1987   CRAY PM SCHEDULE.
09:37:16.4868      0.0005    CSP       3. 25-MAY-1987   Subscribe to "The CLSC News".
09:37:16.4871      0.0005    CSP       4. 28-AUG-1987   CRAYHELP.  jcl to get info on CLSC cray software
09:37:16.4874      0.0006    CSP       5. 25-JAN-1988   NEWS account on vax front-end
09:37:16.4878      0.0006    CSP       6. 26-JUN-1989   Technical assistance is available.
09:37:16.4946      0.0007    CSP       7. 17-NOV-1989   CRAY Job Submission Utility Available -- csb
09:37:16.4949      0.0007    CSP       8.  9-DEC-1989   Annual Users Meeting (Monday, 18-Dec at 3:00 PM).
09:37:16.4953      0.0008    CSP       9. 14-DEC-1989   Supercomputer Users Group meeting (Friday, 2:00 PM).
09:37:16.4956      0.0008    CSP
09:37:16.5031      0.0008    CSP             Ontario Centre for Large Scale Computation                    12/19/89
09:37:16.5034      0.0008    CSP
09:37:16.5038      0.0008    CSP             CRAY-XMP/24 (SN103/24/04)       COS 1.17 - UP3B  BUILT  12/14/89
09:37:16.5041      0.0008    CSP
09:37:16.5044      0.0008    CSP
09:37:16.5243      0.0008    CSP     job,jn=trans,t=100.
09:37:16.7302      0.0019    CSP     account,ac=,us=,upw=.
09:37:16.7308      0.0019    CSP
09:37:16.7311      0.0019    CSP     ................................................................................
09:37:16.7314      0.0019    CSP
09:37:17.1212      0.0050    EXP     *delete,pdn=trans,id=trans.
09:37:17.1215      0.0050    EXP     *fetch,dn=trans,text='trans.for'.
09:37:17.1218      0.0050    EXP     *save,dn=trans,id=trans.
09:37:17.1247      0.0052    CSP     access,dn=trans,id=trans.
09:37:17.1738      0.0052    PDM     PD000 - WAITING FOR OFFLINE DATASET RECALL
09:39:04.0355      0.0052    PDM     PD000 - PDN = TRANS             ID = TRANS     ED =     1  OWN = YCRAY
09:39:04.0358      0.0052    PDM     PD000 - ACCESS  COMPLETE, SIZE =     251
09:39:04.1033      0.0058    CSP     cft77,i=trans,l=0,on=f,trunc=32,integer=46.
09:39:04.6137      0.0113    USER    FF001 - CFT77     VERSION 3.1      09/29/89 12:47:16
09:40:00.1852     34.0208    USER    FF002 - COMPILE TIME   34.014 SECONDS
09:40:00.1920     34.0211    USER    FF003 - 11670 SOURCE LINES
09:40:00.1927     34.0214    USER    FF004 - 0 ERRORS, 183 OTHER MESSAGES
09:40:00.1934     34.0218    USER    FF005 - CODE: 10880 WORDS, DATA: 11824 WORDS
09:40:00.3988     34.0245    CSP     fetch,dn=file,text=.
09:40:06.3044     34.0245    SCP     Dataset transferred from remote task:
09:40:06.3047     34.0245    SCP      VAX TO CRAY: %SYSTEM-S-NORMAL, normal successful completion
09:40:06.3051     34.0245    SCP     VAX TO CRAY: FILE=PLUTO$SIB2:[YSCOTTJC.PARKER.TRANS]FILE3.DAT;1
09:40:06.3053     34.0245    SCP     VAX TO CRAY: 14992 BYTES TRANSFERRED
09:40:09.1331     34.0245    SCP     SS004 - DATASET RECEIVED FROM FRONT END
09:40:09.3860     34.0246    CSP     assign,dn=file,a=ft05.
09:40:09.3890     34.0247    EXP     *dispose,dn=tt,text='usere:[yscottjc.list]trans.std'.
09:40:09.4513     34.0252    CSP     segldr,go.
09:40:15.1420     34.0263    USER    SG000 -  SEGLDR Version 5.0  - 10/02/89     (Chg-05/15/88 Patch-14)
09:40:15.1424     34.0263    USER     (c) Copyright Cray Research, Inc., 1983, 1987
09:40:17.4386     34.4477    USER    SG030 - 2 caution errors encountered
09:40:17.4411     34.4479    USER    SG001 - Begin execution
09:40:24.9978     40.6474    USER    UT010 - STOP          in $MAIN
09:40:25.0088     40.6475    CSP     exit.
09:40:25.0091     40.6475    CSP     END OF JOB
09:40:25.0165     40.6475    CSP
09:40:25.0168     40.6475    CSP
09:40:25.1221     40.6477    USER        Job name -                                TRANS
```

```
0(    :25.1228     40.6478    USER     User number -                                  YCRAY
09:40:25.1232      40.6479    USER     Job class name -                               SHORT
09:40:25.1236      40.6479    USER     Job sequence number -                          13808
09:40:25.1240      40.6479    USER
09:40:25.1248      40.6481    USER     Time executing in cpu -                  0000:00:40.6477
09:40:25.1253      40.6483    USER     Time waiting to execute -                0000:02:08.5813
09:40:25.1258      40.6484    USER     Time waiting for I/O -                   0000:00:12.5782
09:40:25.1263      40.6486    USER     Time waiting semaphore -                 0000:00:00.0000
09:40:25.1269      40.6487    USER     Time waiting in input queue -            0000:00:00.0337
09:40:25.1273      40.6488    USER     Memory * CPU time (MWDS*sec) -                 17.89334
09:40:25.1277      40.6489    USER     Memory * I/O wait time (MWDS*sec) -             5.04663
09:40:25.1282      40.6490    USER     Memory * sem wait time (MWDS*sec) -             0.00000
09:40:25.1286      40.6490    USER     Minimum job size (words) -                     50176
09:40:25.1290      40.6491    USER     Maximum job size (words) -                    634880
09:40:25.1295      40.6492    USER     Mimimum field length (words) -                 45568
09:40:25.1299      40.6493    USER     Maximum field length (words) -                629760
09:40:25.1303      40.6493    USER     Mimimum JTA size (words) -                      4096
09:40:25.1307      40.6494    USER     Maximum JTA size (words) -                      5632
09:40:25.1312      40.6495    USER     Disk sectors moved -                           27546
09:40:25.1316      40.6495    USER     FSS sectors moved -                                0
09:40:25.1322      40.6496    USER     User I/O requests -                             1801
09:40:25.1326      40.6497    USER     User I/O suspensions -                          5305
09:40:25.1332      40.6498    USER     Open calls -                                      30
09:40:25.1336      40.6498    USER     Close calls -                                      9
09:40:25.1340      40.6499    USER     Memory resident datasets -                         0
09:40:25.1348      40.6500    USER     Temporary datasets sectors used -                 95
09:40:25.1352      40.6500    USER     Permanent dataset sectors used -                 341
09:40:25.1356      40.6501    USER     Permanent dataset sectors saved -                  0
09:40:25.1362      40.6502    USER     Resource usage information not available.
09:40:25.1366      40.6503    USER     Sectors received from front end -                  4
```